DOCUMENT RESUME

ED 275 342 IR 051 690

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TITLE	Teachers, Information and School Libraries.
INSTITUTION	United Nations Educational, Scientific and Cultural Organization, Paris (France). General Information Programme.
REPORT NO	PGI-86/WS/17
PUB DATE	Jun 86
NOTE	121p.
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052) -- Reports - Descriptive (141)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Annotated Bibliographies; Curriculum Guides; Guidelines; *Information Needs; Information Seeking; Inservice Teacher Education; *Library Skills; Preservice Teacher Education; *School Libraries; *Teacher Education Curriculum; Teacher Educators; *Teacher Role
IDENTIFIERS	General Information Programme; UNESCO; UNISIST

ABSTRACT

These guidelines are designed to show how teachers in both initial and continuing education should be trained to be information conscious and to integrate the use of school libraries and information skills in the curriculum. Topics discussed include information handling, school libraries, and teachers; teachers and their contexts; teacher education and information skills; and school libraries and teacher education. Three areas under which activities within teacher education could be organized are identified: (1) information skills and teachers' professional development; (2) information skills and the school library; and (3) learning how to learn and the school library. The outline of a possible course syllabus for the instruction of teachers and prospective teachers in the educational and curricular use of school libraries is provided, the methodology/structure of the course is discussed, suggested implementation strategies are presented, and the role of teacher educators is considered. Three appendices include a select annotated bibliography that is coded to indicate the intended reading audience, extracts of documentation from two schools in the United Kingdom which illustrate the process used to develop policies for incorporating information skills across the curriculum, and four case studies which illustrate approaches being implemented within teacher education in Zimbabwe, England, the United States, and the South Pacific region. References are also provided. (KM)

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Teachers, information and school libraries

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General Information Programme and UNISIST

United Nations Educational,
Scientific and Cultural Organization

Paris, 1986

Original: English

PGI-86/WS/17
Paris, June 1986

TEACHERS, INFORMATION AND SCHOOL LIBRARIES

prepared for IFLA Section on
School Libraries Working Group

by

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Scientific and Cultural Organization

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Recommended catalogue entry :

Hall, Noelene

Teachers, information and school libraries / prepared by
Noelene Hall [for the] General Information Programme and
UNISIST. - Paris : Unesco, 1986. - 110 p. ; 30 cm. - (PGI-86/WS/17)

I - Teachers, Information and School Libraries

II - Unesco. General Information Programme and UNISIST

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PREFACE

For many years the General Information Programme of Unesco has been issuing an important number of guidelines to facilitate, in Member States, the development of national information systems, including libraries, information services and archives.

Many information specialists noted that information services are not as developed as they could be and when they exist they are often underused. One of the reasons for this paradox, according to some experts, is that users are not aware of their own information needs and how to fulfil them. Very often, they do not know which information services exist around them or how to make use of them.

This problem has been recognized for a long time within Unesco. For instance the second Medium Term Plan of Unesco indicates: "There also appears to be a need to familiarize users with the basic documentary techniques and with modern means of information processing, so as to encourage them to make full use of the systems available to them. Taken together, these training activities help to bring about conditions conducive to a fruitful dialogue between information specialists and the users of information - which alone can ensure that the services provided are continually adapted to changing needs" (Unesco Second Medium Term Plan - 1984-1989 - 4 XC/4 Approved, paragraph 7046).

Many activities under the Unesco Regular Programme are thus directed towards user sensitization and training, in particular organization of training seminars, preparation of training packages and publications of guidelines in the area of user education.

These actions should be viewed in a wider context. Often, it has been asserted that we are moving - some countries already are - in an information society, that is, a society where the production, the use and exchange of information becomes the object not only of a growing section of the economic life, but also the concern of all the members of the society as individuals. Each of us is surrounded by information coming from different sources, information which takes many forms, from the mass media to the archives or personal notes. Whether in his work or private life, the individual is overloaded by useless information but at the same time he needs certain information to take decisions. Many countries have made tremendous efforts to improve literacy rates. We are reaching a stage when we will have to make people information literate, that is, capable for work and for their everyday life, to look for, evaluate and use information properly.

This enormous challenge cannot be met easily and it will probably take, as for literacy programmes, years and maybe generations before achieving perceptible results. It is however important to start early, in particular for the future generations who will soon be the main agents of the productive society. The present Guidelines are an attempt in this direction. They are intended for school teachers and show how they should be trained to be information conscious and to integrate the use of school libraries and information skills in the curriculum. The educational system is the best place to start.

If teachers are convinced of the importance of information, they will certainly transmit to their pupils the capacity to look for it and to use it. These Guidelines explain the issues involved in this area and propose a model curriculum for teachers.

Recent orientations of the educational system have given more importance to autonomy, self instruction and personal opening up. The teacher is no longer the unique source of knowledge and acts more as a guide. Programmes are made more relevant to the social context and everyday life. The school library or resource centre becomes an important centre for learning. Learning is not memorizing but gathering, selecting and synthetizing information available from many different sources.

The present Guidelines cover the basic issues related to this concern, aiming, in particular, at the teachers themselves, in the framework of both initial and continuing education. Some important points, such as the use of information sources available and the information handling capabilities required outside the school environment, need to be elaborated. These will be dealt with in other publications.

The designations employed and the presentation of the material throughout these Guidelines do not imply the expression of any opinion whatsoever on the part of Unesco.

Any comments or suggestions for improvement or any report on the experience gained by other countries in using these Guidelines are welcome. Correspondence should be sent to the Division of the General Information Programme, Unesco 7 place de Fontenoy, 75007 PARIS, France.

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ACKNOWLEDGEMENTS

The IFLA Section on School Libraries gratefully acknowledges the financial support from Unesco which enabled the forming of a Working Group to produce this report.

The Coordinator of the Working Group wishes to record thanks to members of the Working Group; to teacher educators and librarians in the United Kingdom and Australia who contributed valuable comment on the preliminary report; and to colleagues from various countries who responded to publicity about the project.

Special thanks are due to Judith Crewe, Sue Halbwirth and Helen Thompson from Sydney, Australia, who contributed ideas for the design of the course modules and who participated in editing and proofreading the drafts. In particular, the help of Frances Laverne Carroll from Norman, Oklahoma (USA), in working with the Coordinator to incorporate comments on the preliminary draft into the final draft is warmly acknowledged.

The wordprocessing skills of Audrey Wylie of Macquarie University, Sydney, Australia, need special recognition. Her expertise, calm and cheerfulness throughout the stages of the drafts have provided much support to the Coordinator.

Finally, the Coordinator owes special thanks to Ann Irving, Chairperson of the IFLA Section on School Libraries, whose encouragement throughout the project has enabled the report to become a reality.

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Chapter 1

INFORMATION HANDLING, SCHOOL LIBRARIES AND TEACHERS

> Information, defined as knowledge in communicable form, is recognised today as one of the main requirements for development. Indeed, the ability to record and use data, information and knowledge is one of the most important and fundamental human characteristics.[1]

1.1 Aims of Present Study

This international study, Teachers, Information and School Libraries, aims to develop guidelines for the instruction of teachers in the educational and curricular use of school libraries by exploring how the effective school library

- provides opportunities for pupils to develop information skills;
- links learning, and resources for learning, by focusing on the processes and content oriented to learning how to learn; and
- supports and influences a dynamic educational programme within the school by responding to the information needs of teachers and contributing to their professional growth.

The main audiences for the report are teacher educators, librarians and teachers involved in the preservice and inservice education of teachers. To provide a meaningful framework for these groups, the specific aims are:

- to analyse aspects of the contexts in which teachers work that relate to the teaching of information skills;
- to examine how the concept of information, and the skills required for its handling, might become a focus within the context of teacher education;

- to develop a concept of the school library within the educational process that enables an across the curriculum approach to the teaching of information skills and that responds to teachers' information needs; and
- to develop guidelines for the integration of the educational and curricular use of school libraries within teacher education programmes.

By developing each of the above the report first provides an understanding of teachers as information workers and then considers possible roles for the school library before presenting guidelines for the education of teachers.

Throughout this report the term prospective teachers refers to students who are completing preservice teacher education courses and field experiences prior to taking up positions as teachers. The term teachers refers to those who have completed preservice teacher education courses and are employed in teaching positions in schools. The length and breadth of teacher education programmes would vary from system to system and it is thus hard to be certain of what can be achieved in preservice and inservice stages of professional development. The model of the stages in the growth of school systems developed by Beeby[2] in the 1960s, and the relationship of the general education and professional training of teachers to these, appears to have application today. The guidelines, therefore, need to be considered within this framework.

1.2 Teacher Educators and School Libraries

Teacher educators are beleaguered by advice from many quarters about how they should provide in initial teacher education for all the eventualities likely to face teachers in an increasingly complex world. This has led, in many instances, to the addition of innumerable courses to satisfy changing circumstances without any overall reconsideration of the total experience of those who are becoming teachers. Although the notion of teacher education as a continuum - initial/preservice, induction and continuing/inservice - is gaining ground the expectation of prospective teachers, experienced teachers, parents and school children is that teacher education should produce a fully competent and confident teacher able to meet all demands on Day 1. This poses real problems for teacher educators in all countries.

The context of teacher education, however, differs markedly from country to country and, in countries currently described as developing, is influenced by the pressing needs of national development and extending universal education. Teacher education is confronted by the acceleration of knowledge and the need for new approaches to teaching, particularly in mathematics and science. The initial priority has often been for curriculum reform. Currently there are moves in most countries to reform teacher education and relate it to development needs.

In developing countries, where over 40% of the population is under 15, there is a shortage of teachers, and of learning resources. Libraries are likely to be hampered by financial constraints; a paucity of indigenous publications and the use of a language of instruction often different from the mother tongue. School and public libraries may be underdeveloped or non-existent, particularly where the rural nature of the country makes access to libraries virtually impossible. Perhaps because of this, there has been a great awareness of the need for national information policies and structures.

Universal access to information is much more complex than the provision of libraries and other information agencies, desirable as these may be. It is embedded in the nature of learning and how people interact with one another and their environment to make sense of their world. The concept of information in whatever form - oral, visual, print - therefore, appears essential to any educational programme and must increasingly be the concern of all teachers and all teacher educators. The present project originated within this context. Its particular concern is that the school library role within the curriculum is ill-defined and that teachers in training are rarely taught the educational and curricular use of school libraries. A significant consequence of this is that the majority of pupils still leave school unable to retrieve and use information effectively outside the context of the classroom. Within an information society, it is now accepted that such information retrieval and use skills should be important outcomes of schooling.

1.3 Concerns About Information Handling

The General Information Program (PGI) was established by Unesco in 1976 to draw together a number of activities and provide a focus for studies of information, documentation, libraries, and archives. It promotes, in collaboration with the International Federation of Library Associations and Institutions (IFLA), the concept of Universal Availability of Publications (UAP) which aims at ensuring user access to published materials of all types whenever and wherever required. Training information personnel and users is among the highest priorities of PGI. Commitment to educating people in information awareness, retrieval, and use was reinforced at the International Congress on UAP, organised by Unesco with IFLA and held in Paris 1982, as evidenced by the following recommendations:

> 5. Further efforts should be made to devise and develop techniques of educating and assisting users in the use of information systems and libraries.
>
> 6. The education of information users should be integrated into formal education programmes at all levels, from primary education upwards. Information, and where necessary training, should be available to all users on the various possibilities of access to publications and information, and how they could be exploited.[3]

1.4 Concerns About School Libraries

Since its inception within IFLA in 1976, the Section on School Libraries has been concerned with the integration of effective school library use into teaching and learning within the context of an information-based and technological society. It has attempted to work within the framework of the Unesco PGI and IFLA UAP, and has become increasingly concerned with the implications of the concept of access to information for the education of school children and their teachers, and the relationship of school libraries to this. Three projects with Unesco have been completed[4,5,6] respectively concerned with the establishment of school libraries, the importance of literacy and the promotion of voluntary reading by teachers, and the teaching of information concepts and skills by all teachers.

The first project developed guidelines for the establishment of school libraries. These focused on materials, facilities, personnel and programmes in relation to learning. The importance of teachers' knowledge of school libraries was noted:

> A vital aspect of the development of school library media centres is the continuing effort of tertiary institutions to acquaint student-teachers with school library media centres both through courses dealing with materials related to curricula and through the expansion of the libraries of tertiary schools into library media centres. The courses should extend their knowledge of the services of the school library media centre and its use as an educational tool; introduce the use of media in teaching, especially the literature of children and young adults; and include the skills of using a school library media centre.[7]

The report on promoting voluntary reading was addressed to teachers in the recognition of the importance of laying the foundations for an individual's lifetime reading habits and of the teacher's role in initiating the child into the reading process. The attitudes of teachers towards reading were emphasised as all important:

> If the child comes to associate reading with classroom drudgery and rote, he may never reach for a book on his own initiative and upon leaving school may never read a book at all.[8]

The international study on information concepts and skills asserted that "the central activity in all information seeking is concept formation"[9] and surveyed and listed existing instructional materials aimed at familiarising school children with information concepts and skills. It recognised the differential provision of information resources among nations, particularly for young people, and concentrated on skills required for the use of information in its broadest sense rather than on the use of resources gathered and organised in and through school libraries. This study also identified those areas where the creation of instructional materials is possible and suggested guidelines for their production.

1.5 Concerns About the Role of Teachers

The information skills project report emphasised the important role of the teacher:

> The style, attitude and methods of teachers are more influential than the range, nature and quality of materials and support services. If the teacher views his role as that of sole dispenser of knowledge, information handling skills will appear irrelevant and unnecessary.[10]

Implications for teacher education identified[11] were:

- that there is a need for teachers to recognise that the whole world is a potential information source, and that the teaching of information skills to enable pupils to gain experience in seeking and interpreting information is essential learning for living in an increasingly complex world;
- that teachers need training and experience in knowledge about information sources, information skills, and teaching information concepts and skills within the curriculum;

- that the following outline of information skills in the school context be considered as a possible framework -
  - topic definition and defining information need
  - choice of information sources
  - search strategy
  - evaluation
  - organising note-making
  - presentation;

- that the study of projects and assignments normally set for pupils be used in initial teacher education programmes to focus attention on the process those completing the project and assignment need to follow, and in particular to analyse cognitive skills inherent in a project and an assignment;

- that teachers need knowledge and experience to help them understand that the use of information agencies such as libraries, and of information technology, demand -
  - the skills of literacy
  - prerequisite skills (e.g. understanding alphabetical and numerical order for use with catalogues, indexes and shelf arrangement; reading skills, including the ability to apply different reading strategies such as scanning and skimming, and with variable pace; comprehension skills including making sense of what is read and relating it to existing knowledge and the assignment being carried out);
  - evaluative skills (e.g. critical analytical reasoning).

Throughout the present project report the term information skills is, therefore, used to encompass study skills, library skills, computer skills, research skills, life/living skills and inquiry skills. The relationship of skill in the handling of information to learning suggests that the belief held by many teachers that information skills are an optional addition to teaching now needs to be challenged.

The next chapter outlines some recent developments in thinking about teaching and learning. Studies of the use of school libraries and of the teaching of information skills to facilitate learning are considered. Teachers' information needs in relation to these trends are then suggested.

Chapter 2

TEACHERS AND THEIR CONTEXTS

> Where is the wisdom we have lost in knowledge
> Where is the knowledge we have lost in information[12]

Eliot's words may well be used to describe one response by teachers overwhelmed with ever increasing - and frequently conflicting - information about what they should be doing in schools. They are exhorted to respond to, solve or contain the ills of their respective societies - indeed, to transform these societies. Like teacher educators, they are beset by advice on what they should teach, how they should teach, and the discipline and control of children and youth they should enforce in schools. Teachers' own experience, however, may cause them to be sceptical of much of this advice.

This chapter analyses changing perspectives on learning and their relationship to teaching and learning strategies. Resources, teaching and the development of information skills across the curriculum are also considered. The chapter concludes with an outline of the related information needs of teachers.

2.1 A Global Perspective on Learning

Global problems affect the educational structures within society and produce differences from country to country. In many countries not highly developed technologically or industrially there is a rich culture, a predominantly rural and extended family system and a social environment still largely dominated by customary values.[13] Schools, however, are often criticised for teaching knowledge that is out of date. Many developing countries still have school systems patterned on those of the colonial power, usually of a European model.

There is thus a gap between what the school offers and what the country needs. In some developing countries change has been slow while in others there has been ferment and revolution.

During the 1970s the concept of lifelong education in developed and developing countries took learning beyond the school. Activities such as adult literacy and community education programmes have been included within the aims of schools. An awareness of the importance of information in the learning process has resulted. Concern has been expressed by developing countries that their aspirations go beyond economics to autonomy in cultural, social and information areas. The global problems of population growth, poverty, the nuclear arms race, social injustice and inequity are seen as threats to world equilibrium and human survival. These issues have become significant in explorations of a new international economic order, and in the demand for a new world information order.

By the end of the 1970s a report to the Club of Rome stated that a new initiative should be taken to place humans at the centre of global issues and to eradicate ignorance. It was acknowledged that learning designed to maintain an existing system or established way of life may well be the dominant form within many formal educational systems. However, the adoption of a broader concept of learning was advocated as the only way of bridging the human gap (defined as the distance between the growing complexity of global problems and the capacity of humans to cope with them). This concept of learning goes beyond the conventional one of maintenance learning to innovative learning.

> ... learning means an approach, both to knowledge and to life, that emphasises human initiative. It encompasses the acquisition and practices of new methodologies, new skills, new attitudes, and new values necessary to live in a world of change. Learning is the process of preparing to deal with new situations.[14]

To move to innovative learning may well introduce tensions between school learning and community learning and prove difficult for teachers in a highly centralised educational system. These tensions are embedded in the context in which many teachers work.

In some countries where the educational system is less centralised, the dominance of maintenance learning is still evident. Yet theories of learning currently in favour seem to be moving towards the concept of innovative learning outlined earlier. The following perspective of influences on teachers, predominantly in countries of the developed world, gives further indication of the conflicting demands and tensions teachers constantly face in their work.

2.2 Teachers and Learning

The school is inextricably bound up with the social, cultural, economic and political contexts of society. As society changes, the school is asked to take on wider responsibilities with increasingly more diverse clientele. Teachers are urged to break down barriers between school and community, making the transition from school to life outside school less dysfunctional. With the advent of information technology and the so-called information society, the most urgent message that teachers receive is that they must change their ways - and change quickly - so that the focus of the school is on learning rather than teaching.

Change has been, of course, part of teachers' lives for a very long time. However, in the last twenty years the recognition that knowledge has expanded at a rapid rate has made it extremely difficult to reach agreement on curriculum content. Teachers have been challenged to consider the curriculum in a less traditional sense and to keep up-to-date with changes in theories of teaching and learning.

Most curriculum projects have drawn on new theories of learning to incorporate specific strategies of learning and teaching that focus on learners as active participants in their own learning. These strategies emphasise the processes of thinking, feeling and valuing. This is foreign to the concept most teachers have traditionally had of themselves as primarily transmitters of the accepted culture and the chief information source (along with the textbook) to which pupils had ready access. Their major concern has been with the content of teaching, largely seen as subject matter, and the skills of reading and writing in the early years of schooling. Whilst teachers have been encouraged to involve pupils in classroom activities, their main focus has been on the product of these activities rather than on the processes of learning.

Yet all teachers are interested in learning. That is what they perceive to be the outcome of their teaching. Over the last 20 years there has been a major shift in teachers' concern from what is learned to how learning takes place. The nature of learning is now known to be complex, involving intricate mental processes that go beyond the simple acquisition of information. Information needs to be classified, stored in the memory, related to previous knowledge, reflected on, retrieved at appropriate times, related to new information, understood and assimilated. These complex mental skills need to be so well developed in schools that the individual will continue to refine them throughout life. Thus teachers are encouraged to adopt a process approach in which the development of thinking skills is an essential educational goal. Teachers are now asked to consider how children learn and what conditions best influence learning how to learn. A useful synthesis of these trends has recently been prepared for teachers.[15]

2.3 Strategies in Teaching and Learning

Concern about how teachers can use research evidence to enhance their teaching has led to several analyses of teaching strategies as ways of achieving goals. In one analysis Turney[16] identified strategies which are designed to enable mastery of content and achievement of skills, to cause productive thinking, to structure activities, and to induce self-direction. Hyman[17] attempted to demystify the language used to describe teaching strategies in order to make the information more accessible to teachers. Strategies were grouped into three broad categories by naming them according to the essential intent and activity of the teacher. The categories proposed were presenting, enabling and exemplifying. The presenting strategy in which the teacher selects and presents information has traditionally been the most commonly used and, in many cases, the only strategy of teachers. The three strategies are related to goals of teaching and affect the level of pupil participation. Teachers are, therefore, exhorted to develop the ability to use each strategy when it appears to be appropriate to a particular situation rather than to rely on one strategy.

In another approach designed to help teachers widen their strategies of teaching Joyce and Weil[18] identified twenty-two models of teaching. They analysed the goals for which they are appropriate and suggested ways of adapting them for different pupils. The models were grouped into four families that represent a particular view of people and how they learn: information processing models, personal models, social interaction models, and behavioural models. It was proposed that teachers develop a basic repertoire of six to eight models, and then steadily add to these on the basis of need and experience. A consequence of this is that as pupils experience more varied teaching, so will they increase their strategies for learning. The general aim is to develop flexibility in teaching and learning on the assumption that no single strategy can be effective in all situations and for all people.

The complexity of strategies in teaching and learning has been further illuminated by Woods in studies of process and structure within the school.[19,20] These studies suggest sociological factors which interact with particular teaching strategies, influencing their effects. Examples are the interaction between the individual teacher's intentions, the influences of the culture in which the teacher works, the interpersonal adaptations of teacher and pupil encounters and adjustments according to the situation and wider issues impinging on these. It is in the context of the school curriculum that these interactions come together.

2.4 Teachers and Curriculum

These developments in thinking about teaching and learning have influenced the reconceptualisation of the school curriculum. There has been a shift from seeing curriculum as a plan developed elsewhere by a special group called curriculum developers and implemented by classroom teachers. Curriculum is in some countries now developed collaboratively by curriculum consultants and classroom teachers or seen to be a process of interaction among the teachers and pupils and aspects of the culture. The focus in many instances has become resource-based and research-oriented. Pupils are thus involved in learning as an active process with a degree of independent learning as part of the process, if not yet as the goal. Teachers have been urged to see their primary function to be one of emancipating their pupils and empowering them to take control of their own learning so that they will know how to learn in societies of rapid change and decreasing certainties. At the same time there has been increasing pressure from political sources, and society in general, for specific changes in the curriculum. Curriculum design and curriculum evaluation at all levels are thus made more complex and strongly influenced by the more immediate demands voiced by organised groups within society and the exigencies of particular governments. This counters much of the encouragement given to teachers to give more attention to the processes of learning.

The focus on learning how to learn has emphasised the use of information and the sources from which it can be acquired. Pupils are encouraged to search for, identify, evaluate, select, synthesise, reformat and present information. This has gradually drawn attention to the importance of the fundamental skills emphasised in school learning. Increased concern about literacy and the importance of reading and writing has had an important impact on the curriculum in all countries. A realisation of the relationship of reading, writing and talking to learning as a thinking process has resulted in curriculum guidelines now including long lists of skills as well as subject concepts and content. The important relationship between language and learning is also emphasised. Teachers are encouraged to recognise the importance of talk, particularly in collaborative learning in small groups, and of listening, observing, and feeling, as well as reading and writing, in encouraging pupils to participate actively in constructing meaning and making sense of their world. Resources for learning have become an important component of the curriculum.

2.5 Teaching and Resources

Changes in concepts of teaching and learning drew attention to the need for the teacher to move from the use of a single text to multiple texts and a variety of teaching aids. Providing opportunities for pupils to interact with a wide range of multimedia resources was also emphasised. In countries where national curriculum projects were developed, resources were produced to help teachers implement the new approaches. Sometimes called 'teacher-proof', these were attempts to change teachers in a relatively painless way. The introduction of worksheets, topic work, projects and assignments provided frameworks for pupils to seek out their own information, sift, sort and organise it. In order for this to work effectively, resources at various levels of difficulty and presentation, and in sufficient quantity, became an essential part of the curriculum.

As the emphasis on resource-based learning grew, the school library, where it existed, changed from a bookstore to an active multimedia centre; and, where it did not exist, attempts were made to establish it as an essential unit within the school. This growth was particularly evident in the United States, Canada and Australia where financial support in the 1960s and 1970s enabled better facilities and resource provision to become a reality. Great claims were made for the role of the school library in providing for different learning styles and encouraging individualised instruction and independent learning. Yet reliance on the single textbook did not entirely disappear as teachers saw it as providing a useful framework and starting point for study when working with a class group.

Teachers have not found the change to resource-based learning and research-oriented teaching easy. The reality they faced in many countries was a much more varied clientele whose first language was not the language of instruction or whose home environment immersed them in another language and culture. Perhaps many teachers retreated to the comparative safety of the classroom and the textbook, and the increased control of the presenting strategy, because they were confronted with complex issues in teaching and learning in a multicultural society and found the resources which were available to be inappropriate for their needs. Some teachers, of course, have resisted these changes or been unable to change because of real or perceived system constraints. In some countries curriculum is still centrally developed, as are textbooks and activities books, and the teacher's role is to implement these. Learning resources in developing countries are likely to be in a language other than the mother tongue and are dependent on the teacher's translation where pupils are not able to read easily in the language of instruction. Resource availability is limited and, in some instances, teachers may have only one book - or none at all.

Where school libraries existed teachers generated some use of them, and librarians tried to meet pupil needs in completing projects and assignments. Whilst attempts were made at relating the school library to changing emphases in teaching and learning within the school curriculum, the limited staffing of libraries meant that the dominant concern appeared to be with resource provision and management. Teachers got on with teaching; librarians seemed to be preoccupied with organising the library resources and giving some minimal instruction in the use of the school library. Teachers and librarians appeared to work in isolation and were unable to find any common ground within the curriculum. As librarians observed that pupils did not appear to have the skills to complete assigned work effectively, however, they responded by developing user education or bibliographic instruction programmes. There has been a gradual trend in these programmes to move from a concern with library based location skills to concern for learning and a comprehensive approach to the cooperative teaching of information skills across the curriculum.[21]

2.6 Information Skills Across the Curriculum

This trend holds promise for a fruitful dialogue between teachers and librarians about how learning takes place within the curriculum. Important to this dialogue is the work of the Information Skills in the Curriculum Research Unit,[22] a project which was based within the Inner London Education Authority and funded by the British Library. This was an attempt to work with teachers in schools to explore the possibilities and constraints of integrating information skills into everyday teaching and learning. An assumption of the research was that the introduction of a number of new approaches to teaching and learning over the last 20 years revealed several 'skill gaps' which "could be bridged if pupils and teachers were confident in manipulating information sources".[23] Teachers, therefore, need to accept their responsibility to introduce and reinforce skills for locating, retrieving, selecting, organising, evaluating and communicating information. An outcome of this research has been the use of a broader framework to examine skills which are also applicable to successful library use. This framework has been used to develop workshops for teachers and librarians within inservice courses.[24,25]

The initial focus on language across the curriculum[26,27] encouraged schools to develop policies and teachers to include language skills in the context of teaching and learning in their special areas. A stronger base for dialogue has been contributed by more specific analyses of information skills related to completing project work in the secondary school,[28] or topic work in the primary school.[29] Other contributions to this dialogue are studies concerning the teaching of study skills within the context of different subject areas and levels of education,[30] a detailed investigation of study and information skills in schools,[31] and ideas for teaching pupils how to learn.[32,33,34] The impact of information technology has also brought into clearer focus the interactive search process when querying a data base. The need to formulate questions, determine commands, and evaluate information reveals in a controlled way the complex decision-making process involved in information retrieval and use. Information skills, then, is used as a broad term and encompasses what has been variously described as study skills, library skills, computer skills, research skills, life/living skills and inquiry skills. The fusion of user education programmes of libraries within this broader framework has increased the possibility of improvements in teaching pupils how to learn and of integrating school library use into the curriculum.

Given the complexities of teaching and learning, and the constraints under which teachers work, there is still a danger that information skills will be taught in isolation and not related to their purpose. The need to give constant reminders that education is not simply about handling information but about the wider goals of meaning, understanding, knowing, doing, thinking, imagining, expressing and communicating, has been emphasised. Information skills are seen as a means of achieving these wider goals.[35] The subtle change reported in one primary school as a consequence of a move to a skills based curriculum suggests a parallel with the notion that children must be the 'owners' of their language to recognise its power. If children are to recognise the power of information then they need to be taught to deal confidently with information handling problems.[36] That is not at all easy, however, as teachers themselves have to have confidence in dealing with information handling problems in order to help children deal with them effectively.

2.7 Teachers' Information Needs

Whilst it has been necessary to take a generalised approach in examining the contexts in which teachers work, the dominant theme appears to be one of change, although the rate of change would vary.

A tentative conclusion is that, in order to avoid being overwhelmed by the amount of information with conflicting messages, teachers have to be able to handle information and make sense of it in the contexts in which they work, and construct their own knowledge from it. With this knowledge they can then give consideration to alternative courses of action as an individual or collectively. A crucial need for teachers, therefore, is to develop a concept of information and the sources to which they can turn. Having gained access to appropriate sources, they need to be able to retrieve information and interpret it so that they can evaluate its usefulness to their needs and, where necessary, transform information into action.

Implicit thoughout this brief analysis is the need for teachers to have information about:

- the society and community in which they work together with appropriate communication skills to enable the fostering of a close working relationship with their immediate community
- how children learn and the strategies in teaching and learning that help them learn how to learn
- information skills and the strategies for teaching information skills across the curriculum
- the role of the school library and school librarian in teaching information skills and in helping children learn how to learn
- the identification, evaluation, selection and use of learning resources
- the role of the school library in accessing, evaluating and producing learning resources
- school-based curriculum decision-making and the communication skills needed for collaborative planning and teaching.

It would seem essential that teacher education at preservice and inservice stages provide opportunities for teachers and prospective teachers to consider areas of information need and to develop confidence and competence in their own skills for handling information.

The next chapter examines aspects of teacher education to determine the feasibility of the concept of information becoming a focal point within that context. Also considered is the role of libraries in teacher education in responding to teachers' information needs and in helping them to develop appropriate information skills.

Chapter 3

TEACHER EDUCATION AND INFORMATION SKILLS

Teaching within schools is a highly complex process. The teacher's central activities involve planning, implementing and evaluating activities designed to help groups of learners develop competence and confidence in knowledge and skills delineated as a school curriculum. Teaching is therefore intentional. Learning, however, is an individual process involving complex cognitive and affective skills. It may be intentional but can be incidental within the group situation because of the complex variables at work. There may be a mismatch between teaching and learning within the context of the classroom. Teachers have, therefore, had to focus attention on how to minimise the effects of this mismatch as they manage groups of children and young adults within schools. Teacher education has not been able to move too far from this concern although its ideals go well beyond this narrow focus. The tension between the ideal and the reality - the theory and the practice - continue to constrain teacher education, particularly at the preservice stage. The dilemma facing teacher educators is, therefore, whether to socialise prospective teachers into the occupation of teaching or to help prospective teachers to bring about change in teaching.

In a recent study Tafel[37] has questioned the current components of the traditional model of teacher education - knowledge, pedagogy and practice teaching. Drawing implications from futures research, she recommends that programmes should emphasise how learners gain access to information, how they use information and how they create new knowledge as no teacher can be considered expert in everything.

This chapter considers studies of the concerns identified by teachers and discusses how they use information in planning and decision-making. Consideration is also given to libraries and teacher education and the skills for handling information that teachers need to develop.

3.1 Teachers' Concerns

Many studies of teachers reveal that they have a range of concerns throughout their careers. An important series of studies in the United States examined the stages of becoming a teacher[38] and found that this process was complex, stressful, intimate and largely hidden. A concern was defined as anything of consequence to a teacher, and a conceptual framework grouped these concerns into three categories:

> survival concerns, primarily about feelings, with the most intense being about class control
>
> teaching situation concerns, primarily about the limitations and frustrations in the teaching situation, with the most intense being about method and materials
>
> concerns about pupils, primarily about how pupils learn, their social and emotional needs, and how to relate to pupils as individuals, with the most intense being about how to control the teaching situation so that they can attend to these needs.

There is debate about whether these concerns are stages or clusters, and whether teachers experience them in a particular sequence. A recent international review of research[39] suggested that these concerns are more inclined to overlap but did give further evidence of their existence. This review also identified the eight most frequently perceived problems (in rank order) of teachers:

- classroom discipline
- motivating pupils
- dealing with individual differences

- assessing pupils' work
- relationships with parents
- organisation of class work
- insufficient materials and supplies
- dealing with problems of individual pupils.

Other studies of teachers[40,41,42,43] have also revealed a long list of problems teachers perceive as hindering their teaching and thus causing frustrations and raising their levels of anxiety.

Making a list of problems and responding to these in an ad hoc way may not be very helpful to teachers or teacher educators, however. Teacher educators have increasingly acknowledged the importance of context on teachers' needs, perceptions and perspectives on their work. The scope of teacher education has been broadened to include inservice as well as preservice education, and the definition of the beginning teacher now encompasses the first three years of teaching as well as the preservice stage. This at least provides the possibility of a better understanding of the early stages of becoming a teacher so that the number of concerns and problems can be reduced or at least anticipated and confronted.

3.2 Teachers' Planning and Decision Making

If teachers perceive a wide range of concerns and problems embedded in the context in which they work, then teacher education is obliged to help them to a resolution. One possible area is planning. Interest in the preactive phase of teaching, i.e. before the interactive phases with a class group begins, has focused attention on the teacher as a decision maker and problem solver. In recent years research studies[44] have shown that teachers do not use the traditional approach to planning - rational models and behavioural objectives - which has dominated so much curriculum development and many teacher education programmes. Rather, teacher planning appears to be an intuitive and creative process that is easily changed in the interactive phase of teaching. Using a prescribed plan is perceived as inhibiting this process.

Rather than beginning with objectives, teachers tend to concentrate on activities and subject matter and balance multiple goals such as maintaining a flow of activity, reducing management problems, teaching concepts and skills, and maintaining a social organisation. Teacher educators are being encouraged to emphasise the reflective aspects of teaching and help teachers and prospective teachers to examine how they gather, organise, interpret and evaluate information in the planning process. How the teacher makes decisions within the complex context fraught with accelerating knowledge and conflicting demands, concerns and anxieties is highly personal and problematic. A central issue emerging in teacher education is how teachers integrate information about pupils, subject matter, and the classroom and school environment in order to reach a judgement or decision on which their behaviour is based.[45]

3.3 Teachers and Information

Information then seems central to the work of teachers. They use it in planning and decision-making and in interacting with pupils. Whilst there has been an interest in information seeking patterns and information needs, the lack of a unifying theory to guide the studies of teachers and information is still a problem. Existing studies have concentrated on identifying sources (including colleagues) used, research awareness and use, the use made of reading, conferences and workshops, and the use of libraries and other information agencies. Attempts have been made to establish a profile of teachers' needs, and inservice consultants/advisers and courses, teachers' centres, libraries and information networks have been provided or at least recommended. In many countries these are the responsibility of the Ministry of Education or the equivalent agency.

Three recent surveys[46,47,48] suggest that teachers' needs are embedded in their practice, that teachers are low in information consciousness but high in problem consciousness, that they say they see the importance of keeping up-to-date but feel they lack the skills to identify, access and use information. Many teachers also express concern that their own professional education has not given them the skills to identify and handle sources of information and that they wish to broaden and update their knowledge of the information network. Teacher colleagues are the most used source, and the preferred sources for frequently needed information are within the teacher's own school. Although teachers do not see the school library at present as a very fruitful source for professional information, they appear to express a preference that it become one because of its convenience.

In a review of teachers and their reading of the periodical literature of the teaching profession[49] in which studies in the United States, Canada and Australia were compared, the conclusion was that teachers and administrators read very little. The five major difficulties teachers perceive are:

- lack of time to read and consider new information
- unsatisfactory dissemination within the school of journals, and similar materials (less than 5 per cent of school library budgets are spent on education journals)
- lack of awareness about what to read and where to look for it
- lack of allocated time within the school timetable to discuss the information and its implications for action.

Perceived influences which stimulated reading were encouragement by the principal, staff discussion, and whether the school library subscribed to educational periodicals. Even where the school library did subscribe, teachers still needed to be informed of library holdings and encouraged to use them. The importance of reading as a source of ideas to help teachers retain some creativity throughout their careers has been stressed. A major recommendation of this review is that teacher educators should help teachers, and those coming into the profession, to see the value of the periodical literature of the teaching profession for the day-to-day concerns of teachers and not equate periodical literature with academic research-based courses at college or university.

Most surveys have used questionnaires which impose limitations on the findings. An interesting pilot study in the United Kingdom, however, aims to illuminate the flow of information in a London school by using interviews and participant observation.[50] Four groups of interacting variables have been suggested as a conceptual model: factors relating to the information itself, organisational factors, interpersonal factors, and individual factors. This study emphasises the complexity of the flow of information in a school and highlights the need for teachers to develop confidence in information skills so that they can easily identify and use potential information sources.

3.4 Information Dissemination and Adoption

A related area of concern is the failure of teachers to value and apply research information and other resources. The impact of curriculum projects and other innovations has frequently not had the intended results. Whilst dissemination of information is attempted, the process of adoption is difficult to determine.

Most countries provide information services through a Ministry of Education and a curriculum development unit. Additional government funded agencies such as the Schools Council in the United Kingdom and the Curriculum Development Centre in Australia have been involved in the development of curriculum projects and the provision of other information services and activities. These information services and activities include curriculum outlines, bibliographies of multimedia resources, and suggested activities for lessons, which are automatically distributed to schools. Frequently the Ministry or curriculum development unit provides inservice courses, and a library service available to all teachers, at the central and regional levels of the system. Other agencies that form part of the education information network include teachers college libraries, university libraries, school libraries, and specialised resource centres, cultural centres, museums and art galleries.

Teachers then are generally surrounded by potential information sources. Given that they have high problem consciousness, do they reject outside information because they perceive too great a mismatch between it and the reality of their situation? Given that they perceive lack of time as one of their biggest problems in keeping up-to-date, do they experience information overload and thus exclude sources that are too problematic? Given that they are low in information consciousness, do they perceive their need to improve their information skills as a low priority?

Certainly the research and development model has frequently distanced teachers from researchers. Teachers have perceived the dissemination of information about projects and research as an imposition of change not related to their immediate concerns. In an analysis of the impact of research Nisbet and Broadfoot[51] suggested, however, that there are four stages in this process: firstly research influences perceptions, then aspirations, then techniques, and finally the motivation of teachers. Impact of research, therefore, does not occur in the direct sense envisaged by the research and development model, but through cultural diffusion over time. This process influences ways of thinking. In another analysis of several knowledge dissemination studies in the United States Paisley and Butler[52] suggested that teachers' information seeking behaviour can be stimulated, but highlighted the importance of people in encouraging this behaviour. These people were usually non-threatening outsiders to the system; they had the ability to create awareness, interest, adoption and implementation of projects and innovations. Maintaining continuous personal interaction between teachers and these outsiders over extended periods of time was found to be an important factor. In an Australian study of the use of the publication Set: Research Information for Teachers, a joint project of the New Zealand Council for Educational Research and the Australian Council for Educational Research, Jeffrey[53] found that there were still problems within the school of disseminating information, and that personal discussion sources were the most highly used. Another study by Jeffrey[54] asked teachers to rate thirty sources of information. The results showed that consulting the school librarian rated in the top four along with suggestions of other teachers, observing other teachers and consulting heads of departments in the school. The study concludes that the school librarian and heads of departments have potential inservice dissemination roles which should be expanded.

Another related area of concern is inservice teacher education. This is usually involved in helping teachers with the implementation of new approaches to teaching and learning - in helping them change in some way through information update in content or pedagogy. Initially such courses were seen as providing information and experiences which individual teachers could take back to the school and implement and, through a ripple effect, influence other teachers to change. As the complexity of change in the organizational context has been recognised, the emphasis has shifted to school focused and school improvement programmes.

In the United States a model which appears to focus on how teachers receive new information has been developed as an aid for those responsible for inservice programmes. This Concerns Based Adoption Model (CBAM)[55] is based on the assumptions that change is a process not an event, that individuals need to change before institutions can, and that change is a highly personal experience involving developmental growth in both feelings and skills concerning the use of the new programme. Several instruments enable the gathering of information about teachers' concerns, attitudes and feelings, the degree to which they are managing the new programme on a day-to-day basis, and how teachers' ideas about the new programme match the developers ideals. In the United Kingdom the workshop approach for helping teachers become more information conscious has been advocated. Hounsell[56] reports that this active mode of learning has enabled participants to share experiences and problems through reflecting on particular activities and materials. This process enabled the workshop leader to facilitate interaction and reflection. The following observation highlights the importance of experience and context for the adoption of research findings:

> An initiative prompted by new and challenging information from the research literature may run counter to prevailing assumptions and values, require an unwelcome redeployment of responsibilities or finance, or stem from an enthusiastic junior member of staff who is isolated from the arenas of decision-making where approval to go ahead must be sought.[57]

There are, then, daunting problems in disseminating and adopting information. The availability of information is only one part of the highly complex process of receiving information, making sense of it, adopting it, and taking action to implement it in particular contexts. How the teacher feels about this process appears to be a crucial factor.

3.5 Libraries and Teacher Education

The traditional role of libraries has been to increase the availability of resources - and, more recently, information - for the use of particular clientele. To facilitate the use of these resources, libraries have set up particular services and, in some instances, user education programmes. Libraries in colleges and universities are likely to provide access to curriculum materials and computerised data bases such as ERIC for students and teaching staff. Interlibrary loans are also provided, although in some instances they would be available only to teaching staff. Although there is much variation from country to country, school libraries have not provided all of these services to teachers in schools.

Although resources are available, barriers to library use still appear to exist. These include the low perceptions teachers and students have of libraries and librarians, the complexity of communication between librarians, students and teachers, and the lack of understanding of the complexity of the library role in the educational process on the part of teachers and librarians. Barriers to the role of user education programmes include the lack of definition of library skills and the lack of evaluation of the process of finding information in the library and the quality of the product of library research. The recognition that the development of clear objectives and a developmental approach to library instruction is essential because teachers focus on the use of library materials whilst librarians focus on retrieval skills within the library. In one Australian study[58] students completing teacher education studies reported a great number of concerns they had about using the school library and the teacher education institution library. By far the majority of these were survival concerns. One conclusion of this research is that the potential of teacher educators and librarians as providers of information about the library role in the educational process does not appear to have been realised. Yet the reduction of these concerns seems urgent.

Approaches to library user education have been somewhat uncertain. The most common patterns include orientation to the library and course related activities which usually take the form of the introduction of bibliographic tools with a focus on information retrieval. Hilton[59] compared approaches in the United Kingdom and the United States and identified two extremes: the static description of sources and services and the engagement of students in developing their own criteria for evaluating sources and defining information. She favours the latter approach as it appears to enable students to develop a livelier attitude to information and a critical awareness of all types of media and the need to look for alternative viewpoints to provide a more balanced perspective. Lubans[60] sees the curriculum reform movement in the United States as an opportunity to integrate user education into basic academic competencies, as the skills of finding and using information have been identified as essential within this context.

Four examples within teacher education exemplify the diversity of approaches. The first, in the United States, uses a diagnostic test and then assigns students on the basis of need to a course for credit which takes place prior to admission to the teacher education programme, or provides a programmed workbook (specifically designed to be completed in the library) which is administered by the Library Science Coordinator in the Department of Education.[61] The second, in Zimbabwe, has been integrated into the course, General English, which all students complete, so that the users' ability in the second language can be taken into account. Part of the course is designed around an integrated series of authentic study activities involving the use of English, information and communication skills. Subject lecturers, English Language lecturers and the librarian are involved. Whilst there were some practical problems, this approach enabled the assessment of language, reading and study skills involved in library-based research and the effect these have on the successful completion of assignments.[62] The third, in the West Indies, integrates library skills with comprehension skills, research and study skills and is designed for students in their first year of a new three year intra-mural programme in the teachers' colleges. This proposed course was devised by members of the School of Education, including the School of Education Documentalist, and Tutors of Reading in teachers' colleges.[63] The fourth, in the South Pacific Region, is a short course on the effective use of information resources, reading materials and libraries, developed as a component of teacher education required in all preservice teacher education programmes. This course can also be developed as an inservice activity for the professional development of teachers.[64] These examples demonstrate the trend towards the integration of skills in library use with broader study skills. This awareness further reinforces the need to develop a conceptual approach to information skills in the context of teacher education.

The potential of libraries, and in particular the school library, in responding to teachers' concerns, in providing information to assist them in planning and decision-making and in facilitating information dissemination and adoption does not appear to be well integrated into current teacher education programmes. Both prospective and experienced teachers are, on the whole, encouraged to use libraries in a general way or given an introduction to the variety of resources available in libraries. However, frequently this could add to their difficulties instead of reducing them. The South Pacific Region course, however, has a clearer focus in that it aims to help teachers be aware of and able to use information and resources - including libraries - for their teaching. This course also aims to help teachers encourage children to develop information seeking and library-user skills by cooperating with the teacher-in-charge of the library.[65] The workshop model recommended in an earlier IFLA/Unesco project also provides a clearer focus in that it aims to introduce the concept of information and the skills required for its handling, to explore methods for creating relevant instructional materials and to devise pedagogical strategies for including such instruction in existing curricula.[66]

3.6 Teachers' Information Skills

The implications of the analysis so far are that the concept of information, and the skills of handling it, should become a focus within teacher education. Whilst the proliferation of definitions of information and the lack of a unifying theory present problems, there appears to be little doubt that teachers deal with a wide range of information about teaching and learning and that they need to develop considerable skill in sifting through this and making decisions about their work. They are indeed information workers in that they use and generate information but they may not yet be aware of the importance of this aspect of their work. The need for teachers to develop competence and confidence in information skills is already an important aspect of teacher education even though it may not as yet be clearly conceptualised. It is crucial, therefore, for teacher educators to provide opportunities for teachers and prospective teachers to reflect on the concept of information, the processes at work and the sources on which they can draw to foster their continuing professional development.

The brief analysis of teachers' information needs offered in this chapter suggests that within schools and teacher education institutions there should be a better understanding of:

- the concerns and anxieties perceived by teachers
- the complexity of planning and decision-making that teachers are engaged in and of the process of gathering, organising, interpreting and evaluating information in this part of their work

- the concepts of information, information seeking patterns and information flow

- the importance of reading periodical literature as a valuable source of ideas for the day-to-day concerns of teachers and as a means of retaining creativity in teaching

- studies of teachers' information needs and the major difficulties teachers perceive in keeping up-to-date and in using information sources, agencies and networks

- the complexity of educational information dissemination and adoption

- change as a process not an event, and the need for individuals to change before institutions can

- change as a highly personal experience involving developmental growth in both feelings and skills concerning the use of new programmes

- the role of libraries and other agencies, and the importance of developing competence and confidence in their use, in order to use them effectively as sources of information and ideas

- the role of the school library in keeping up-to-date with professional information and linking into the wider educational information network.

Information skills can thus be seen as a synthesis of existing aspects of teacher education, user education, study and research skills and communication skills. If these are combined with the emphasis on how learners gain access to information, how they use information and how they create new knowledge referred to earlier,[67] a reconceptualisation of teacher education programmes with the concept of information as a focus does appear feasible.

The next chapter examines the relationship between school libraries and teacher education with a view to analysing the teacher educator's role in promoting the use of the school library as a natural part of the teaching and learning process and as a source of information and ideas for teachers. Guidelines are suggested that will assist teacher educators to integrate into teacher education programmes a broadened concept of the school library as central to the educational process.

Chapter 4

SCHOOL LIBRARIES AND TEACHER EDUCATION

The complexities of becoming a teacher and maintaining professional development throughout a career in teaching are now becoming clearer. The role of the school library, however, does not yet appear to have made much impact in this context. This chapter outlines suggested roles for the school library and identifies some constraints that inhibit school library development. Consideration is also given to school libraries in relation to educational outcomes and information handling. Some possible curriculum frameworks for integrating school libraries into teacher education are also discussed.

4.1 The Role of the School Library

The school library has been variously described in the literature as a place where books are kept, a reading or study centre, an organizational unit, a resource centre, a media centre, a source of ideas, a recreational centre, an information centre, a communications centre, a learning centre and a learning laboratory. Despite this, the major purpose of the school library has invariably been stated as to support the total school programme. This statement has been intended to emphasise that school libraries will differ from country to country and, within countries, from school to school, depending on the goals and the preferred pedagogy of the educational system and of the school. A clearer idea of the school library as integral to the educational programme of the school and related to the stages of concern of teachers and prospective teachers appears essential, however, if the school library is to be treated in a serious way in teacher education. Guidelines for teacher educators, therefore, need to be developed with a concept of the school library within the educational process that responds to teachers' information needs and that enables an across the curriculum approach to the teaching of information skills.

The establishment of school libraries in developing countries has been closely related to the development of formal education. In many countries these libraries are more likely to be found in secondary schools and to provide resources in the language of instruction which is probably the second language for the majority of pupils and teachers. It could thus be viewed as a place where books are kept and as a reading or study centre. This may mean that many teachers see the school library as peripheral to their immediate concerns.

The possibility of the school library responding to teachers' information needs by taking on additional tasks and avoiding the limited role of a mere adjunct service within the school has been advocated by Gassol de Horowitz.[68] Additional tasks such as the administration of textbooks, contributing to inservice teacher-training, library instruction, becoming a resource centre for the local community, and promoting literacy and the creation of the reading habit within the school and the community, have been outlined as appropriate in certain contexts. A strong recommendation has been made that public and school library systems need to be developed jointly as integral to the national system and to focus on the context in which they are placed rather than adopt models developed at other times and in other contexts.

> .... We need a school library committed to the role of renovating the formal education system while, at the same time, responding to its most pressing legitimate needs, working within that system without being submerged in it. We want a school library which from the start will join the public library to push theoretical research and practical activity and go beyond the limits traditionally imposed on ideas about institutions, methods,

> programs and users, so that the library action may expand to meet the virtually unlimited needs of individuals and societies.[69]

Essential elements in such a strategy are said to be flexibility to allow for programme modifications, an interdisciplinary approach to allow the participation of other institutions and disciplines, and a change in emphasis from institutions to programmes.[70] Temu[71] suggests the possible development of primary schools as community resource centres with particular responsibility for becoming more efficient in teaching literacy, for providing the means of increasing adult literacy, and providing an information centre for the local community. Such school libraries would combine many of the descriptors in the literature referred to earlier.

4.2 Constraints on School Library Development

In analysing school library development in African countries Mwathi and Ng'ang'a[72] suggest that aspirations for the role of the school library are often hampered by lack of adequate reading and other learning resources. Other problems are lack of accommodation designated for library use and lack of trained staff. As might be expected, school libraries are strongest where a policy of the Ministry of Education or of the National Library Service exist, and planned development to avoid unnecessary duplication of services is part of the national information system. In some countries, however, the lack of awareness amongst teachers of the potential of the school library has meant that a low priority has been given to this development by school administrators and some existing opportunities for funds have been lost. A possible explanation of this low priority is that many developing countries are societies of predominantly oral tradition. This may result in psychological and social problems when the introduction of another language impacts on the community's group orientation and reading is seen only as a private activity. This is particularly so if reading experiences are in the language of instruction. John[73] suggests that school libraries should include non-book materials and writings on local life to give meaning to everyday experience and confidence in using language.

These concerns are reiterated in an outline of problems common to all developing countries. Those given particular emphasis are the conflict between an oral traditional culture and the introduced book culture, the availability of appropriate and relevant materials in the local language and the language of instruction, the absence of information on reading problems in developing countries, and the need to educate teachers about the role of school libraries. In working towards overcoming some of these problems Ogunsheye[74] suggests that learning packages on aspects of science and environment, agriculture, government, culture and recreation be developed for primary school children and adult non-literates. The use of oral history methods to create local resources could also be used. Multipurpose media centres, which would include simple production facilities, should be provided to meet the needs of schools and adult learners. Understanding the potential of this wider role of the school library in relation to other libraries and agencies concerned with the generation, distribution, use, storage, preservation, and sometimes evaluation, of information has been emphasised as essential knowledge for all teachers so that they develop a concept of the information network and the information skills needed to use the network effectively in teaching and learning.[75]

The majority of these recommendations have been made by librarians, not teacher educators or teachers, whose concerns, as argued earlier in this report, are elsewhere. Attempts have been made in some countries, however, to develop documents that incorporate the role of teachers and administrators in school library development. A particularly good example is that produced by the Ministry of Education in Ontario, Canada. This document focuses on resource-based learning and describes how a partnership between principals, classroom teachers, school librarians and Boards of Education can work towards the development of the library resource centre to implement the goals of the school curriculum.[76] The need for a clear statement of purpose for the school library programme, which would focus on the educational and curricular use of the school library, has also been advocated. A succinct example is the written purpose of library services accepted as policy in the Vancouver School District, Columbia, Canada:

> The aim of the school library program is to assist students to develop a commitment to informed decision-making and the skills of lifelong learning.[77]

It is asserted that such a policy necessitates teachers and school librarians forming cooperative teams to plan and implement units of study which integrate a wide spectrum of information skills.

> Through such planning and cooperative teaching students develop, master, and extend research and study skills in different subject contexts and at varying levels of difficulty. A secondary emphasis is placed on language improvement and enjoyment, and the promotion of voluntary reading through cooperatively developed programs.[78]

Examples such as these could facilitate discussion with teachers on the role of the school library within the teaching-learning process.

However, the complexity of implementing these ideas within the school curriculum needs to be recognised. In the United Kingdom a review of research on developments in user education concludes that the main emphasis thus far has been on using the library rather than on using the information it contains in the implementation of the goals of the teaching-learning process. Some concern is expressed about the consequences for teachers and school librarians of adopting some of the stimulating ideas without enough reflection and experience.[79] This concern is supported by the assertion that the school library role has been controversial in that its advocates have emphasised resource-based learning and library research without providing enough evidence to convince teachers of its educational worth.[80] These concerns suggest that stimulating greater use of the school library by teachers needs to be approached with forethought.

4.3 School Libraries and Educational Outcomes

In recent years some attempts to provide a research base as a rationale for the educational and curricular use of the school library have been made. A summary of research studies in developing and developed countries for a seminar for World Bank Education Department staff focused on the teaching-learning role of the school library and its relationship to pupil achievement, particularly in reading and support for independent learning.[81] A comprehensive review of the research literature which was done in the United States in 1984 identified twenty research reports completed between 1953 and 1982 which link school libraries with enriched learning. Although it is difficult to establish cause and effect with any certainty and although the strength of the relationships vary, there is evidence in these studies for linking school library service with a number of educational outcomes. These include the verbal component of the Scholastic Aptitude Test, overall academic achievement, and the quality of reading. In addition the use of school libraries is related to the development of problem-solving skills, use of newspapers, word study skills, verbal expression, improved self-concept and critical thinking. Three studies also showed improved achievement in the curriculum areas of Mathematics, Science and Social Studies.[82] This research literature could form a basis for discussion with prospective teachers and teachers on the relationship between the school library and outcomes of schooling.

Results of recent research in Australia have reaffirmed the potential of the secondary school library as an access point to educational information data bases for teachers. A National Education Information Exchange Network has been proposed in which existing information data bases and educational libraries would cooperate, and through which a curriculum information network would disseminate relevant professional information to schools. The role of the school library would act as a bridge between teachers and the agency providing the service. Emphasis is put on the proviso that the school librarian would need to take a more active role than at present in the dissemination of information and in the encouragement of its adoption. The principal would also need to give direct support to the services provided to teachers from the school library and to the active role of the school librarian in information dissemination and adoption.[83]

The question of what could be discussed with teachers if courses or activities involving the school library were offered has been raised recently:

> We cannot avoid the responsibility of providing a possible agenda, a check-list of options, or menu; the point is that the menu must be drawn up in full consultation with the discipline and current literature of education, so that it has relation to matters which have urgency for concerned teachers, and take cognisance of whatever may be thought of as the accumulated wisdom of the profession. Wherever possible, examples of successful practice should be included.[84]

The analysis earlier in this report of teachers and their contexts and of teacher education and information skills attempts to set some parameters for such courses and activities so that they may better relate to the concerns and needs of teachers and prospective teachers. Careful management and selection of content, research and other relevant literature, and the design of workshop and other activities, are essential. The challenge, then, is how to incorporate into teacher education at preservice and inservice stages activities that demonstrate the educational and curricular use of school libraries and at the same time respond to teachers' concerns and needs.

4.2 Information Handling and School Libraries

To develop programmes in teacher education that focus on the integration of the educational and curricular use of school libraries necessitates confronting the complexity of becoming a teacher and maintaining continuing professional growth. The encouragement of school library use thus needs to be carefully related to the immediate concerns of teachers at preservice and inservice stages of teacher education without much reliance on the rhetoric of the potential of the school library role in global terms.

The evidence in this report suggests that teachers must surely continue to feel overwhelmed by the complex demands made on them, and withdraw further into the safety of what they feel they know best, unless there is a reconceptualisation of teacher education programmes with the concept of information as a focus. The tendency of teacher education programmes to provide prospective teachers with information and resources without also providing opportunities for them to develop competence and confidence in a spectrum of skills in the handling of information could add to their concerns. Furthermore, if teachers rely only on the courses that form part of their initial training and feel they lack the skills to keep up-to-date with educational information, they are unlikely to withstand the various social, economic and political pressures placed on schools in countries throughout the world. The likely future for teachers is that they will continue to be dominated by a focus on problems and a lack of time to go beyond their immediate classroom concerns. Making better use of the school library may be seen as a problem not worth the time and effort by teachers who themselves lack competence and confidence in handling information.

A possible focus at the preservice stage of teacher education is the way that libraries can help in the learning process - as a prospective teacher and as a student. The concept that there are skills in handling information needs to be integrated into existing courses and the relationship between this concept and library use constantly reinforced. Within the context of the teacher education curriculum the relationship of the use of the teacher education institution's library to helping prospective teachers gain competence and confidence in information skills and increased awareness of resources and networks available for continuing professional development needs to be articulated, and opportunities for successful practical application should be provided. Then, examples of how the school library can help continued professional growth through providing access to the wider network of educational information need to be included in all courses. Within the context of the school curriculum the relationship of the use of the school library to helping children learn how to learn and to helping teachers learn how to teach information skills that transfer beyond the classroom needs to be constantly emphasised in all courses and reinforced by successful practical application.

4.5 Curriculum Frameworks and School Libraries

Frameworks that provide possibilities of practical application are the extensive work on language across the curriculum and the developing area of study and information skills referred to in chapter 2. Language across the curriculum focuses on reading, talking, listening and writing for learning. Promoting school library use should help teachers and prospective teachers to analyse how each of these processes can be used to help pupils learn how to learn as they complete topic work, projects and assignments. Observations made in research in the United Kingdom ten years ago still has relevance when considering school library use today:

> The pupils we observed were, in fact, generally interested in, and even enthusiastic about what they were doing. For the most part they were highly motivated and willing to work. The important point is, however, that they were willing to find answers to set questions, or to produce presentations for report-back sessions. What we did not observe was a willingness to reflect on what was being read. The reference book was treated more as a treasure trove of sentences and paragraphs which could be stolen and marketed again in another setting.[85]

Discussions of the variety of purposes in reading and how to help pupils read to learn can engage teachers and prospective teachers in some reflection on four styles of reading - receptive reading, reflective reading, skim reading and scanning - and the need to provide support for pupils to integrate all the processes of learning when using the school library.[86] The realisation that reflective reading is enhanced by small group discussion can break down the barriers that some pupils, and some cultures, have to reading as an individual and isolated activity.

The information skills curriculum framework can also help teachers and prospective teachers to consider stimulating the use of the school library for learning and consider all the processes at work - reading, talking, listening and writing - in an integrated way. The skills domain has been delineated as including four major areas of receptive skills, reflective skills, expressive skills, and personal/social skills and an integrated approach to teaching these skills cooperatively by teachers and school librarians is suggested.[87] A widely used list of questions which clearly outlines the process used when going through any finding-out activity is another approach:

- What do I need to do? (formulation and analysis of need)
- Where could I go? (identification and appraisal of likely sources)
- How do I get to the information? (tracing and locating individual resources)
- Which resources shall I use? (examining, selecting and rejecting individual resources)
- How shall I use the resources? (interrogating resources)
- What should I make a record of? (recording and storing information)
- Have I got the information I need? (interpretation, analysis, synthesis, evaluation)
- How should I present it? (presentation, communication, shape)
- What have I achieved? (evaluation)[88]

The advantage of using this last framework within teacher education with teachers and prospective teachers is the emphasis which helps them reflect on their own information skills and, therefore, encourages them to use it for discussion with pupils as they complete assignments. This could help them consider the complexity of the learning process and recognise the need to provide support through the integration of reading, talking, listening and writing. Encouraging the use of the school library could thus be seen as integral to learning how to learn, as it links learning and resources for learning by focusing on the process skills and content oriented to learning how to learn. In addition, careful planning and implementation of school library use provides opportunities for pupils to transfer information skills beyond the classroom.

4.6 Teachers and School Libraries

In addition to encouraging school library use through the design of topic work, projects and assignments, teachers and prospective teachers should be helped to recognise their crucial role in promoting voluntary use of the school library. It could be argued that voluntary use of libraries and other information agencies should be a valued outcome of schooling and an important measure of how well pupils have learned how to learn. Like their teachers, pupils should be competent and confident in their skill in handling information and able to turn to appropriate sources for particular purposes. The teacher's influence is important in encouraging pupils to use the school library to share their experiences with other class members and to go beyond the teacher's recommendations. Teachers should constantly evaluate voluntary use of the school library and assess this within the school curriculum in discussion with the principal and the school librarian. Some consideration of the ideas suggested for promoting voluntary reading in an earlier Unesco publication[89] could provide a framework for discussion and the design of activities within teacher education programmes. The need for the teacher to take some responsibility to work with the school librarian to provide a dynamic library environment also needs to be emphasised. Encouraging school library use thus needs to be seen as a cooperative responsibiity between teachers and school librarians and an important part of the school curriculum involving time and effort in school based decision-making.

The framework of resource-based learning may be the least useful in preservice teacher education because prospective teachers' awareness of resources is growing at a time when their concerns about how to teach class groups is at its highest. They may perceive the need to become confident in the control of the class so that learning can take place as paramount. Their search for resources at this stage is, therefore, likely to be limited to how they can use and produce resources to teach a concept, introduce a topic, generate some class discussion or extend class work rather than considering how children can use resources to learn. The concept of the school library as a resource centre or a learning laboratory that provides a range of multi-media resources and learning spaces that can be used to generate a variety of learning activities involving reading, talking, listening and writing for learning may just be too hard to contemplate. Certainly this would appear to be the case unless the two previous frameworks are clearly articulated within the teacher education curriculum and resources are readily available.

Yet the emphasis on resource provision and management seems to dominate the literature on school libraries available to teachers. Only passing reference is made to the need to teach pupils the skills of using the resources and the school library. With few exceptions, these are not connected to the wider issues of teaching children how to learn. Too often, like ships that pass in the night, teachers and school librarians teach skills in isolation from one another, whilst children and young people struggle with their own learning in the space between. Prospective teachers do not appear at the conclusion of initial training to have fully grasped the concept of the school librarian as a teaching partner in helping pupils develop skills in learning how to learn. They appear to have some concept of the role of school librarians in providing resources - if and when the teacher needs them - but a low consciousness of their role as trusted colleagues in the dissemination of information and in the discussion and encouragement of its adoption for the betterment of school teaching and learning. The most desirable time for these concepts to be grasped is at the inservice stage of teacher education. Yet, the problem remains of certain attitudes being formed in preservice teacher education which appear to be hard to change once full-time teaching begins.

Promoting school library use within teacher education is problematic. On the one hand, school librarians see it as reducing teachers' problems and uncertainties and increasing their opportunities for implementing many of the ideas embedded in the current teaching-learning process. On the other hand, teachers see the school library as adding to their problems and uncertainties and compounding the complexities embedded in the current teaching-learning process. Any attempt within teacher education to conceptualise the educational and curricular use of school libraries must, therefore, acknowledge this contradiction as a starting point in order to increase teachers' feelings of competence and confidence in their work.

The next chapter outlines sample activities and a proposed course syllabus that could be incorporated into teacher education programmes where appropriate. Some discussion of the role of teacher educators and suggested implementation strategies for reconceptualising the teacher education curriculum are also included. These constitute guidelines for the instruction of teachers in the educational and curricular use of school libraries.

Chapter 5

GUIDELINES FOR ACTIVITIES/COURSE ORGANISATION

In developing these guidelines for the instruction of teachers and prospective teachers in the educational and curricular use of school libraries, consideration has been given to the design of a series of activities which can be integrated into existing courses or into the design of a separate course in preservice or inservice teacher education. Before adopting either of these approaches, teacher educators and librarians need to discuss the effective school library role within their particular context. At present the following appear to be possible broad goals for the effective school library:

- to act as a resource centre that supports and influences a dynamic educational programme within the school by providing information services that respond to the information needs of teachers and foster their professional development

- to act as a learning laboratory that provides opportunities for pupils to develop information skills and develop a commitment to informed decision-making.

- to act as a learning laboratory that links learning and resources for learning by focusing on the processes and content oriented to learning how to learn, and provides opportunities for pupils to become self directed learners and develop a commitment to lifelong learning.

After some discussion of these goals, decisions can be made on methods and materials most appropriate for the particular context in relation to the stage of school library development.

Corresponding to these broad goals for the effective school library are the following three areas under which activities within teacher education could be organised:

- Information Skills and Teachers' Professional Development
- Information Skills and the School Library
- Learning How to Learn and the School Library

Their appropriateness for various countries can only be judged in each context and the focus on the school library will be dependent on its level of development. If the activities are successful in raising the consciousness of teachers and prospective teachers about the importance of information skills and of having access to libraries, then greater support for school library development may be an outcome. An annotated bibliography in Appendix A of this report identifies some current approaches in practice related to the concept of information and the educational and curricular use of school libraries. The items have been classified by the use of symbols to denote application to preservice or inservice teacher education and primary or secondary education. In most cases adaptation will need to be made to fit local conditions as the majority of the examples come from the United Kingdom, the United States, Canada and Australia where much of the relevant research and development has taken place.

Throughout the following guidelines the term student is used to refer to teachers and prospective teachers completing courses in inservice or preservice teacher education programmes. This draws attention to their role as learners rather than as teachers.

5.1 Information Skills and Teachers' Professional Development

The user education programme of the library of the teacher education institution needs to be broadened and integrated with the teacher education curriculum to reduce the survival concerns of students and to help them begin to conceptualise the library role in the educational process. Teacher educators, librarians and reading/study skills specialists need to collaborate in the planning and teaching of activities that better relate to the concerns and needs of students as they learn to become teachers. Similar collaborative planning and teaching should also be included for teachers at inservice courses.

Some examples of activities are:

- Integrating information gathering and study skills and/or integrating library user education with teaching English as a second language.
- Integrating library user education with the consideration of studies of teachers as information workers, and helping prospective teachers and teachers to identify appropriate information sources and educational information agencies, libraries and other community information sources at the central, regional and local levels.
- Integrating library user education with studies of teachers' concerns and problems and the use of periodical literature as a source of practical ideas and information that might reduce some of these.
- Integrating library user education with the analysis of information skills needed to complete assignments in teacher education courses.
- Integrating library user education with an analysis of the role of the school library in keeping up-to-date with professional information and linking into the wider educational information network.
- Integrating library user education with an analysis of the role of the teacher education institution library and the school library as sources for ideas in teachers' planning and decision-making.

The method recommended for promoting these activities is the workshop, in which participants work in groups and analyse and reflect on the process they experience and the relevance this could have for their work as teachers in schools. It is emphasised that these activities should have a broadening effect and not focus too narrowly on the institution's library. The aim is for students to develop confidence and competence outside this context. Students should be encouraged to see the whole world as a potential information source and to recognise that they need to develop information skills to enable them to identify, select, access and evaluate information relevant to their work. They must also be encouraged to see the role teachers have in the development of effective school libraries. Activities should thus provide opportunities for students to reflect on the concepts of information and learning, and the sources on which they can draw to foster their continuing professional development. Appropriate assignments should be developed and integrated with teacher education courses to enable students to demonstrate competence and develop confidence in information skills.

5.2 Information Skills and the School Library

To enable students to increase their awareness of the role of the school library as a resource centre or learning laboratory in the teaching of information skills, teacher educators, librarians and school librarians need to collaborate in the planning and teaching of activities that demonstrate this role and that are integral to the teacher education curriculum. If students have a low consciousness of information skills they themselves need, then they will find it hard to conceptualise an information skills curriculum. Too often teachers have seen themselves as isolated information workers, relying only on immediate colleagues for information and ideas. At present they do not appear to recognise school librarians as teaching colleagues who might be able to lead them to information and ideas related to their needs and to participate in cooperative teaching. Collaborative planning and implementing of topic work, projects and assignments that help students conceptualise the school librarian's role need to be integrated into the teacher education curriculum.

Some examples of activities are:

- Use the information skills curriculum framework to analyse some projects/assignments and discuss the skills demanded of pupils to successfully complete the work.

- Analyse some projects/assignments designed for school pupils to identify what pupils are expected to do, and the information skills that need to be taught.

- Use a variety of sources that attempt to delineate information skills from particular perspectives and ask students to identify those skills they would need to teach and suggest strategies for teaching these.

- Discuss the language of assignments and the possibility of cooperative planning and implementation of these in cooperation with school librarians - plan an assignment and implement in a school.

- Analyse the working relationship between teachers and school librarians to stimulate discussion that can be related to the concerns of teachers, e.g. in selecting resources, planning units of work, implementing activities in the school library.

- Use examples of the teaching of information skills by school librarians to analyse the complexity of helping pupils learn to use school libraries effectively and transfer skills taught in one context to another context.

- Analyse the complex process of developing a whole school policy for the teaching of information skills which involves the school librarian and all teachers in the school.

These activities should involve a workshop approach in which participants work in small groups that help them focus on the complexity of the teaching of information skills and the planning of practical applications for school contexts. Examples of successful practice should be included whenever possible and school librarians should participate. Activities should provide opportunities to recognise the importance of teaching information skills and of working with other teachers and the school librarian in developing a whole school policy for the successful implementation of this. Appropriate assignments should be developed and integrated with teacher education courses to enable students to demonstrate competence and develop confidence in planning and teaching information skills.

5.3 Learning How to Learn and the School Library

To enable students to conceptualise this aspect of the role of the school library as a resource centre or learning laboratory in helping pupils learn how to learn and develop a commitment to lifelong learning, teacher educators, librarians and school librarians need to analyse the relationship of this to the teaching of information skills. These skills contribute to learning how to learn but the commitment to lifelong learning also suggests confidence in using all the processes of learning, a high degree of motivation and a positive attitude to learning. The design of a wide range of activities that foster positive attitudes and that go beyond the classroom need to be an integral part of the teacher education curriculum. Whilst topic work, projects and assignments should have these positive outcomes, they are sometimes perceived by pupils as school work to be done as quickly and as painlessly as possibly. Students also need to recognise that the processes of learning emphasised in the classroom do not automatically transfer to other contexts. They need to be helped to see the school library as a readily available context different from the classroom in which, through cooperative planning with school librarians, they can encourage pupils to grow in independence and self direction.

Some examples of activities are:

- Analyse and reflect on the school library role through brainstorming or using all or some of the following descriptors from the literature: a place where books are kept, an organisation unit; a reading centre, a study centre, a resources centre; a media centre; a source of ideas; a recreational centre; an information centre; a communications centre; a learning centre; a learning laboratory.
- Interview the school librarian to analyse how the school librarian participates in the school's reading programme, and how the school librarian works cooperatively with teachers to help pupils read to learn.
- Analyse the working relationship between teachers and school librarians in the planning and implementing of units of work.

- Design activities that help pupils develop the voluntary reading habit through the use of the school library and regular contact with the school librarian.

- Use a questionnaire to find out about the school library programme and use parts of it in designing activities that promote pupil selection, evaluation, production and presentation of resources as individuals and small groups.

- Use examples of pathfinders/topic data files from school libraries and teacher education institution libraries to focus on the process of searching and decision-making involved in using library and information systems and analyse how this might encourage pupils to learn how to learn.

- Analyse the problems experienced by pupils when doing assignments (as identified by teachers and pupils) and determine how the language across the curriculum research on reading, listening, talking and writing can help reduce such problems.

These activities should involve a variety of strategies to enable participants to actively work on seeing the potential of the library as a learning laboratory for achieving long term goals such as self-direction. Constant reflection on how classroom and library activities can be complementary and on the importance of having a clear purpose need to be central to the teacher education curriculum. Examples of successful practice and the involvement of school librarians are also essential. Appropriate assignments should be developed to integrate this aspect of the school library role through the inclusion of library-based activities together with a rationale for them.

5.4 Outline Course Syllabus

There is debate in some countries about the desirability of providing a separate course because of its similarity to the teaching of information skills in isolation in schools and the dissatisfaction with this approach. The advantages of focusing in a coherent way on the concepts of information and learning and the relationship of the school library to these gives support, however, to such an approach. The following outline of a possible course syllabus attempts to provide such a focus.

Proposed Course Title: **INFORMATION, RESOURCES AND LEARNING**

Summary:

A course of one semester duration of at least 4 hours per week to be included in the training of all teachers - early childhood to secondary in all subject areas. It is suggested that this course be in the first quarter of the professional preservice education of teachers. The course could also be provided as part of the inservice education of teachers.

Broad Aims:

- To outline the role of information transfer in national development.
- To develop skills in using and selecting teaching/information resources and consider their relationship to strategies in teaching and learning.
- To develop confidence and competence in information seeking/handling strategies.
- To become aware of the range of teaching/information resources available and consider teachers' concerns and use of information in professional development.
- To develop skills and confidence in handling information for the gathering, preserving and using of local resources, e.g. oral history, local artifacts, flora and fauna.
- To become aware of the school library as a resource centre and a potential focal point of information within the school and community.
- To analyse an information skills programme and consider ways of developing a whole school policy to implement this across the curriculum.
- To demonstrate the above in lesson preparation and practice teaching.

Methodology/Structure of the Course

The course is divided into 4 modules. These modules are designed to encourage independent thought and demand an investigative approach to the learning process. It is desirable that in each of the modules there is a progression from the global issues of information and resources to a focus on practical classroom activities and strategies for implementation of information skills. A variety of formats should be adopted such as workshops, discussions, demonstrations and visits. Lecturing staff should be varied and include teacher educators, librarians, communications specialists and guest lecturers.

Assessment procedures for the modules will depend very much on the philosophies and demands of the educational system in which the modules are being taught. However, it is strongly recommended that assignments be of a varied nature with an emphasis on practical tasks oriented towards classroom/school activities and practices. A sample final project has been included with each module.

This outline is but a guide - flexibility is essential as course content will depend on the needs, facilities and resources of individual nations. It is desirable that local resources such as the school library are the basis of course content.

MODULE I

WHAT IS INFORMATION?

Objectives:

At the end of the module the student will be able:

- to outline issues in global information transfer;
- to understand these issues in relation to their national situation;
- to appreciate the importance of information skills in society;
- to demonstrate skills in the evaluation of information;
- to recognise the role of information in their continuing professional development as teachers;
- to consider information flow within a school.

Content:

A
- concept of information society
- global communications and information transfer - free flow of information
- information rich vs information poor
- information = power
- national information issues, e.g. freedom of information, censorship.

B
- development of strategies and skills for evaluating information
- analysis of information skills needed as a student and as a teacher and the implications of this for the needs of pupils.

Sample Final Project

Create a file on current national information issues. This file should be designed to be (a) used by pupils, and (b) be housed in the school library. Briefly outline how the information for inclusion in the file was selected.

MODULE II

INFORMATION ORGANISATION

Objectives:

At the end of the module the student will be able:

- to outline major national and local information agencies, including the school library;
- to demonstrate familiarity with the new information technologies;
- to demonstrate skills in utilising these agencies and technologies for information retrieval;
- to organise information in an effective way;
- to retrieve information in an efficient manner.

Content:

A . national/local information agencies - what are they, where are they and how can they be used?

. new commununications/information technologies

. the computer data base - communicating with external data bases

. satellite communications

. videotex.

B . information retrieval skills

. search strategy

. organising information

. notemaking, reading for information

. creating a computer data base.

Sample Final Project

Write a report for submission to the national educational authority stating how the introduction of one/some of the new communication technologies could assist education practices in your area. This could be from the point of view of a wide "issues" perspective or highlighting practical ways technology could be integrated into a particular school or class programme.

MODULE III

PRESENTING INFORMATION

Objectives:

At the end of the module the student will be able:

- to analyse how pupils learn and to create effective and appropriate formats for specific teaching and learning needs;
- to demonstrate an ability to present information in effective and appropriate formats for specific teaching and learning needs;
- to construct effective pupil project/assignment work that encourages pupils to develop information skills;
- to consider the school library as a resource for the selection and production of learning and teaching resources.

Content:

A . selecting teaching resources
  . creating/producing resources appropriate to the learner
  . selecting media appropriate to the topic
  . analysing the audience - children and their learning needs.

B . producing appropriate resources, e.g.
  (a) A/V resources - video production, slide programmes, sound recordings, photography, charts and posters, overhead transparencies
  (b) arts and craft - pottery, puppet making, model making, local arts and crafts
  (c) creative teaching resources
  . adapting resources for a specific teaching need.

C . setting effective assignments/project work that encourage pupils to develop information skills
  . using school resources - school library.

Sample Final Project

Produce, select and/or adapt 12 resources to be used in a unit on "information" for a defined class group. For each resource give your rationale of how you selected/designed the resource and briefly outline how each could be used, e.g. introducing a topic, as a stimulus.

MODULE IV

TEACHING INFORMATION SKILLS

Objectives:

At the end of the module the student will be able:

- to understand the concept of information skills;
- to develop guidelines for the implementation of information skills across the curriculum;
- to employ a range of techniques for teaching information skills;
- to evaluate pupil achievement in information skills;
- to recognise the school library as an educational force in helping pupils develop information skills and develop a commitment to lifelong learning.

Content:

A . information skills throughout the total schooling period
- reading, listening and viewing skills and their relationship to information skills
- information skills and school policy
- information skills and the across the curriculum approach to teaching.

B . approaches to learning and teaching
- planning lessons to teach information skills
- evaluating information skills.

C . the role of the school library in teaching information skills
- the role of the school librarian in teaching information skills in cooperation with teachers - a team approach
- teaching pupils how to learn
- the aim of lifelong learning.

Sample Final Project

Design an integrated unit of at least 1 week's classwork, for a defined class group. This unit must focus on one/or more information skill and draw on more than two curriculum areas. Students will be expected to draw information and ideas from all the modules of this course.

5.5 Suggested Implementation Strategies

From the analysis in this report of teachers' concerns and high problem consciousness, it appears that an appropriate conceptualisation for attempting to design and introduce methods and materials on the educational and curricular use of school libraries into the teacher education curriculum is the The Concerns Based Adoption Model (CBAM) developed in the United States. This model focuses on monitoring change in the use of an innovation. The definition of an innovation seems to encompass the school library.

> An innovation can be a new syllabus, a new teaching style, an administrative change, or any new thing or idea that causes teachers to make a change in their professional activities.[90]

Several instruments are included in the model to assess teachers' feelings and attitudes, use and concepts concerning the innovation. Seven stages of concern about the innovation have been identified but it is emphasised that concerns overlap stages -

> Individuals experience a variety of concerns at any one time; however, the degree of intensity of different concerns about an innovation will vary depending on the individual's knowledge and experience. Whether the person is using or not using, whether he or she is preparing for use, has just begun use or is highly skilled with the innovation will contribute to the relative intensity of different concerns.[91]

Whilst this has been developed to assist in the design of inservice activities, it also has relevance for preservice activities. Those using the model in its entirety in teacher education require appropriate training and experience which could be provided at the educational system and institution level.

Another approach is the workshop model used widely in In-service Teacher Education (INSET) in the United Kingdom. The emphasis here is to move away from a top-down model where experts bring teachers up-to-date with new approaches to teaching and learning with some opportunity - frequently brief - for discussion of the implications for practice. The main focus is on practice which enables participants to reflect on their customary ways of tackling problems. The use of research findings is thus selective and optional and related to the problems identified by participants. This model has been used successfully in the development of the teaching of information skills in secondary schools. The following comment suggests possible benefits:

> Although an individual's professional experience may be made up of a myriad of particularised reflections, tried and tested intuitions, and seasoned know-how, it is not something which can easily be called up and issued on general request, for it is locked into the individual's acquaintance with specific situations and circumstances. If however individuals start from a familiar professional situation of their own choosing, there is then a focus through which to clarify their experience and thus to articulate it, by attempting to make it explicit. Articulating experience is also helped if there is an opportunity to share it with others examining the same or a similar professional situation.[92]

There can be little debate with the concept that engaging teachers in some reflection on their practice is infinitely superior to putting them in a situation where they are once again receiving information about deficiencies in their practice.

5.6 The Role of Teacher Educators

Teacher educators are central to any reconceptualisation of curriculum such as that suggested for teacher education in this report. Without some commitment to helping teachers and prospective teachers gain competence and confidence in information skills to enable them to continue to grow professionally throughout their careers, teacher educators are faced with yet another course or series of activities fighting for a place in an already full curriculum.

As stated in Chapter 1.2 the major concern of this project is that the majority of pupils still leave school unable to retrieve and use information effectively outside the context of the classroom. It has been argued throughout this report that providing teachers and prospective teachers with opportunities to demonstrate competence and develop confidence in handling information could enable them to use the school library to better teach information skills across the curriculum. By integrating appropriate activities within the teacher education curriculum at preservice and inservice stages, the focus of teachers may be shifted from the immediate concerns of content and classroom management and interaction to include the broader concerns of how teachers can teach for the transfer of what is introduced in the classroom to other contexts. It has also been argued that this coincides with emphases in teaching and learning currently forming the content of teacher education curricula, and that teachers thus may welcome attempts to help them use the school library more effectively as a strategy for teaching and learning that encourages pupils to learn how to learn.

Teacher educators act as gatekeepers to information for the majority of teachers through designing preservice and inservice teacher education, selecting and recommending resources, carrying out research, and generating information through publication, conferences and workshops. Similarly teachers act as gatekeepers to information for pupils through designing units of work and assignments, selecting and recommending resources, and generating information through study guides, work sheets and publication. Informal communication among and between both groups is also a powerful influence on the adoption of information. Although there are many external pressures on teacher educators and teachers, their influence on what comes to be valued information and practice is crucial. If the guidelines in this report are to be adopted within teacher education, then it is teacher educators who will need to take the initiative to open the gate to information about the educational and curricular use of school libraries.

The project team thus hopes that this report will assist in encouraging fruitful discussion among teacher educators, librarians and teachers to help in understanding the complex relationship between teachers and information. This could result in the articulation and development of information skills within teacher education and in a better understanding of the educational and curricular use of the school library as essential to learning rather than as an optional addition to teaching. The immediate benefits for pupils would be that they become competent and confident in their handling of information through the use of the school library as a learning laboratory. The long term benefits would be that teachers and pupils would be aware of the various possibilities of access to publications and information, and how they could be exploited.[93] The outcome of this should be that the majority of pupils will leave school better able to retrieve and use information effectively in their daily lives.

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APPENDICES

APPENDIX A	Further Reading: an annotated bibliography
APPENDIX B	Selected Information Skills Across the Curriculum Plans
APPENDIX C	Case Studies:

- Preservice Teacher Education
  - Zimbabwe
- Inservice Teacher Education
  - United Kingdom
  - United States
- Preservice and Inservice Teacher Education
  - South Pacific Region

APPENDIX A

FURTHER READING

selected by **Noelene Hall**

annotated by **Hazel Vickers**

This select bibliography reflects the themes and issues raised in the preceding report and has been included for those who may wish to pursue further particular aspects. Both published and unpublished materials have been included. The published material was located mainly through literature searches while much of the unpublished material was sent directly to the Co-ordinator of the Working Group following publicity concerning the project.

Each item has been annotated so that readers may have some guide to its content and be able to judge its prospective relevance for the diverse needs and conditions of this report's intended audience. Four symbols have been used at the end of each annotation to provide further assistance to readers. These are:

Pre	aimed primarily at those involved in the preservice education of teachers
Post	aimed primarily at educators and practising teachers involved in the inservice development of teachers. Material having classroom application is included in this group
Prim	concerned with primary education
Sec	concerned with secondary education

It should be recognised that the coding symbols pertaining to any particular item are the choice of the annotator, and some items may be of wider interest than that indicated. The country or region of origin of the documents is given at the end of each annotation.

Australia. Curriculum Development Centre. Social science skills: books 1 to 6. Canberra, C.D.C., 1982-1983.

Book 1 Teaching social science skills, by Peter Maccoll and Paul Fennell
2 Finding the facts, by Howard Kelly, Brian Woodruff and Sari Cunningham
3 Social survey, by Andrew King, Beth Norman and Graham Spencer
4 Presenting information, by W. Davidson and C. Breckon
5 Assessment and evaluation, by Paul Fennell and Peter Maccoll
6 Working in groups.

Each of the six books in this series focuses on a particular aspect of social science skill development. These skills are identified as being concerned with inquiry, expression and communication, and social participation. Books 1, 5 and 6 are written for teachers, while the remaining books are directed at students.

Pre Post Sec **Australia**

Australia. Curriculum Development Centre. Visual Education Curriculum Project. Canberra, C.D.C., 1980-1981.

Volume 1 What a picture! Learning from photographs. 1980.
2 part 1 Classroom photography: learning by making photographs - an effective alternative. 1980.
2 part 2 Classroom photography: learning by making photographs - photography made easy. 1980.
3 Seeing and drawing: learning, thinking and communicating through drawing
4 Do you see what I mean? Learning through charts, graphs, maps and diagrams. 1981.
5 Just imagine ... learning through mental imagery. 1980.
6 Pictures of ideas: learning through visual comparison and analogy. 1981.
7 Midweek matinee ...? Considerations for learning from film and television. 1980.
8 Lights, camera, action ... learning by making films and videotapes. 1980.

This series explores the use of pictures and illustrations in the learning process. It promotes the development of skills which utilise visual rather than verbal cues as sources of information. Contains a wealth of strategies and applications across the curriculum for all grade levels.

Pre Post Prim Sec **Australia**

Avann, Pat. Information skills in primary schools. Education Libraries Bulletin (London), vol.27, no.1, Spring 1984, p.1-13.

As a result of an inservice course held by the Coventry Education Authority, a task force was established to investigate issues related to the teaching of information skills in primary schools. Further observation was carried out by the libraries of the local Institute of Education. Results indicated that information skills taught in isolation were not transferred by students to independent research. It was thought, however, that skills could be effectively taught from infant level providing some sense of their purpose was conveyed to students.

Post Prim **United Kingdom**

Banco del Libro. Venezuela. Modular course to train teachers in library skills, use of educational resources, and techniques in the development of reading habits. Caracas, Banco del Libro, 1984-85.

A modular course to train teachers in library skills, use of educational resources and techniques in the development of reading habits. It will be used to train teachers as school librarians, so that they are able to efficiently manage a medium-size library, as well as to train classroom teachers in the use of library resources for the qualitative improvement of education. The final course will be composed of 43 modules, organised in six training units.
(Document not seen by Project Coordinator)

Venezuela

Brake, Terence; Hounsell, Dai; Irving, Ann. Brideshead school: a group exercise for teachers and librarians on the teaching of information skills. Prepared for the British Library Research and Development Committee. London, The British Library, 1982. (R & D Report 5795)

This workshop course designed for practising teachers and teacher-librarians uses group discussion and situational analysis to focus on the issues involved when teachers seek to implement effective teaching of information skills in a secondary school. The structure of the exercise is flexible enough to allow participants to identify and concentrate on those issues they see as important.

Post Sec **United Kingdom**

A course in information gathering and study skills (LA-12): a proposal course for year one diploma students in teachers' colleges. Prepared by Gwen Gbedemah, Sam Myers and Amy Robertson. Joint Board of Teacher Education in association with University of the West Indies School of Education, 1982. Unpublished paper.

Outline of a course for trainee teachers which incorporates an orientation to the college library with a basic program of instruction in library and study skills.

Pre Prim Sec **West Indies**

Craver, Kathleen W. Teaching online bibliographic searching to high school students. Top of the News (Chicago), vol.1, no.2, Winter 1985, p.131-138.

Describes a course devised to teach senior high school students the fundamentals of online bibliographic searching. After instruction in the concepts and vocabulary peculiar to online searching, students were taught how to formulate a search strategy for a particular piece of research. They were then given the opportunity to observe an experienced searcher carry out searches. Student evaluation data is included as well as a consideration of the need to train students to search online in order to meet requirements for in-coming students at some U.S. universities.

Post Sec **United States of America**

Davison, Sandra G. Data file creation - a case study: the pupil created data file project at Milne's High School. Education Libraries Bulletin (London), vol.27, no.3, Autumn 1984, p.52-58.

Describes a project in which secondary school students created their own data base on the subject of communications. Students were first given exercises designed to create an awareness of information before moving on to actual data file creation. Data file creation involved two processes: creation of the data file and design of the keyword list to access the records. Separate groups of students were responsibile for each process.

Post Sec **United Kingdom**

Dike, Virginia. Library education as a means of producing effective teachers for primary schools. Paper presented at the 2nd International Conference on Teaching Practice and Teacher Effectiveness, held at the University of Nigeria, Nsukka, April 6-9, 1983.

To be published as part of the conference proceedings.

Nigeria

Drayton, Paul. Effective library use by teachers: some suggestions for consideration. The Teacher Librarian, (Sydney), no.58, June 1980, p.11-13.

Briefly outlines three areas which teachers should consider when planning research assignments for their classes. These involve an analysis by the teacher of the purpose of the assignment, an understanding of the range of resources and services available through the school library and co-operative planning of the assignment with the teacher-librarian.

Post Prim Sec **Australia**

Fraenkel, Jack R. Helping students think and value. 2nd ed. New Jersey, Prentice-Hall, 1980.

Although written for prospective and practising teachers of social studies, this book's focus on teaching and learning per se ensures its applicability to any subject area or discipline. The interrelated components of instructional objectives, subject matter, learning activities, teaching strategies and evaluation are examined in detail with numerous examples and references provided.

Post Pre Prim Sec **United States of America**

Heather, Pauline. Research on information skills in primary schools. The School Librarian. (Oxford), vol.32, no.3, September 1984, p.214-220.

Describes a research project carried out under the auspices of the Centre for Research on User Studies at Sheffield University. Defining information skills as those techniques which students can use to find information for themselves, the project examined the current practices relating to the teaching of these skills in selected primary schools. One significant finding was that the use made by teachers and students of school libraries is directly related to the teaching methods employed in the school. Well used school libraries were found in schools where inquiry, individualised and resource-based learning predominated.

Post Prim **United Kingdom**

Helle, Marit. In-service workshop for school librarians and teachers on using the school library, 1984. Unpublished paper.

Outline of a one-day planning session developed by school librarians in schools in the Municipality of Baerum, Norway. It is intended to form the basis for discussion in schools about the organisation and use of the school library. Areas canvassed include an analysis of the teacher's expectations concerning the school library, co-operative planning between teacher and librarian, and ideas for promoting the library.

Post Prim Sec **Norway**

Henry, Marian. Sydney Institute of Education - Education elective: the resources centre in learning and teaching, 1984. Unpublished paper.

One semester course of two hours per week offered to prospective secondary school teachers in the Graduate Dip.Ed. (Secondary) program. It aims to provide trainee teachers with the skills to integrate the services offered by school resource centres and teacher-libarians into learning programs they will ultimately construct and endeavour to teach.

Pre Sec **Australia**

Infomatters: information skills workshops for advisers, teachers, librarians and their students. Edited by Gwen Cawith and Ann Irving. Loughborough, Audio Visual Services for the Microelectionics Education Programme (MEP), 1984. (11 booklets and 1 40T BBC disc)

Ten workshop outlines which aim to encourage educators to look closely at the nature of information and translate these experiences into teachable skills and concepts. Workshops 1-5 focus on information and its effective use in schools, 6-8 focus on research skills and 9-10 examine how information is created through different media. Workshop 5 is an adaptation of the Brideshead School workshop already cited in this bibliography.

Pre Post Prim Sec **United Kingdom**

Irving, Ann. Educating information users in schools. London, British Library Research & Development Department, 1983. (Research Review No. 4)

A review of recent research in the U.K. into the various issues, approaches and philosophies involved in educating school students to become efficient users of information. Includes references to studies of teacher education which underline the need for teachers to be efficient users of information as a prerequisite for developing these skills in students.

Pre Post Prim Sec **United Kingdom**

Irving, Ann. Instructional materials for developing information concepts and information-handling skills in schoolchildren: an international study. Paris, Unesco for the General Information Programme and UNISIST, 1981.

Report of an international study into learning materials which support programs for school students aimed at developing skills in the competent use of information. Evaluates a select list of such materials, identifies gaps and suggests guidelines for the creation of learning materials to fill these gaps. The target audience of the study is teachers, teacher-educators and librarians, with special consideration of those working in developing countries. A workshop model for teacher training is outlined briefly.

Pre Post Prim Sec **International**

Irving, Ann. Promoting voluntary reading for children and young people. Guidelines for teacher-training courses. Paris, Unesco, 1980.

Aimed at those organisations or individuals who may be involved in organising courses for teachers on the promotion of reading among children. The importance of reading and the teacher's role in promoting it precede some suggestions on methods for stimulating voluntary reading. Guidelines for the organisation of teacher training courses on reading are provided.

Pre Post Prim Sec **International**

Irving, Ann. Starting to teach study skills. London, Edward Arnold, 1982.

This collection of case studies is intended to provide teachers in secondary schools and further education with ideas about the teaching of study skills. The writers describe how they have approached the teaching of these skills in the areas of English, Chemistry, Geography and Communications. The broader issues of study skills across the curriculum and bridging the gap between primary and secondary schools are also addressed.

Pre Post Sec **United Kingdom**

Knapke, Beth. The curriculum laboratory in an academic library. Maryland, Salisbury State College, 1979 (ED 175473).

This guide for education students to the curriculum resources centre located within Salisbury State College outlines it's collection, physical layout and services provided.

Pre Prim Sec **United States of America**

Lorac, Carol and Weiss, Michael. Communication and social skills: towards a theory and practice of individual language and learning. Exeter, Wheaton for Schools Council, 1981. (Schools Council Communication and Social Studies Project).

Describes a project in which students produced their own film, television and tape/slide programs in a variety of subject areas. The results indicated that the learning of communication and social skills was enhanced as well as improving learning within the subjects themselves. Students were highly motivated and often those designated as having low academic ability displayed high level intellectual skills.

Post Sec **United Kingdom**

Lunzer, Eric and Gardner, Keith (eds). The effective use of reading. London, Heinemann Educational Books for the Schools Council, 1979.

This study examines how average and above average readers between the ages of 10-15 actually use reading in learning. One aspect which was analysed was the use made of reading by students undertaking resource-based courses of study. Observations of students engaged in topic work showed that teachers cannot presume that this type of activity automatically leads to improved reading skills.

Post Prim Sec **United Kingdom**

Mancall, Jacqueline C. Training students to search online: rationale, process and implications. Drexel Library Quarterly (Philadelphia), vol.20, no.1, Winter 1984, p.64-84.

Argues that while conventional tools of information retrieval, such as card catalogues, are taught to school students, computerised information systems and their usage are largely ignored. This case study shows how a classroom teacher and school library media specialist taught a group of students to research one topic using an energy related database available through Dialog.

Post Sec **United States of America**

Marland, Michael (ed). Information skills in the secondary curriculum: the recommendations of a working group sponsored by the British Library and the Schools Council. London, Methuen Educational, 1981. (Schools Council Curriculum Bulletin 9)

Working from the premise that the teaching of information skills in the secondary school is the responsibility of all subjects/faculties, a whole school approach for the development of an information skills curriculum is suggested. The perceived result of such an approach is well planned, meaningful research assignments which recognise the range of skills required for locating, using and interpreting information.

Pre Post Sec **United Kingdom**

Marland, Michael (ed.). Language across the curriculum. London, Heinemann, 1977.

Using the Bullock Report as a focal point, this study is intended as a guide for secondary schools formulating a whole school language-across-the-curriculum policy. It raises aspects for consideration based on the knowledge and practice of others' experiences in this area of language development. Rather than promoting one particular policy or practice, it provides schools with a range of possibilities from which to choose.

Post Sec **United Kingdom**

Matthews, Shirley. The computer as a resource for learning. The School Librarian (Oxford), vol.32, no.4, December 1984, p.331-333.

Argues that any computer in a school library should not be used just for administration but as a resource for learning. The possibilities of computers as tools for handling information should form part of this learning experience. The author briefly describes some of the ways in which she has used computers to develop "topic packages" on various aspects of the curriculum.

Post Prim Sec **United Kingdom**

NSW Department of Education, Division of Services. Total School Development Program. Developed by Diana Collins and Sue Lynch Using the school library in learning. Sydney, Government Printer, 1983.

This package of material is intended for use by a subject department in a secondary school for the purpose of a school inservice activity. It presents guidelines for the co-operative development by subject head, subject teachers and teacher-librarian of assignments requiring library use. While this material is concerned solely with mathematics, its processes may be transferred to any subject department. Material comprises leaders' and participants' notes.

Post Sec **Australia**

NSW Department of Education, Liverpool Region. How to set assignments. Produced by Jo Shintah, Anne Neal and Jeni Black - on behalf of the C.I.C. Teacher Librarian's Group. Sydney, Government Printer, 1983.

Aimed at the classroom teacher, this booklet lists suggestions for the construction of purposeful research assignments which would enable students to achieve attainable learning goals. Written mainly in point form and interspersed with humorous illustrations, its underlying message to teachers is the importance of advance planning in conjunction with the teacher-librarian.

Pre Post Sec **Australia**

NSW Department of Education, Metropolitan East Region. Information and inquiry skills, years 7-12. Sydney, Government Printer, 1985.

The outcome of an inservice course in which heads of subject departments in secondary schools and teacher-librarians discussed the information skills required in a variety of subject areas. Lists of skills appropriate to grade levels are provided for English/Reading, Essay Writing, Science/Agriculture, Mathematics, Geography, Social Science/History, Commerce/Asian Studies and Art.

Post Sec **Australia**

NSW Department of Education. Metropolitan West Regional Library Committee. Guidelines for more effective library service K-6. Sydney, Government Printer, 1983.

Provides guidelines for primary schools wishing to maximise the effectiveness of the services provided through their libraries. Three areas are examined. The first looks at the complementary roles of school principal, classroom teacher and teacher-librarian in relationship to the library. The second makes suggestions for the formulation of a school library policy. The third area provides alternative timetabling arrangements for the teacher-librarian and library use.

Post Prim **Australia**

NSW Department of Education, St. George Regional Development Committee. Social studies and the school library. Compiled by Martha Heeren. Sydney, Government Printer, 1982.

Designed to illustrate how the school library and teacher-librarian may participate in the teaching-learning program for a primary school social studies curriculum. Twenty-one overhead transparency masters are provided to use either selectively or as a unit for staff meetings and discussions. Issues canvassed are the nature and importance of resource-based learning for social studies, the teaching of library/research skills and the role and services of school libraries.

Pre Post Prim **Australia**

New York State Education Department. The elementary library media skills curriculum. Grades K-6. Albany, New York State Education Department, 1980.

Annotated in the Project Loex bibliography. "Describes a three-part program implemented by the State of New York, designed to integrate K-6 library skills into the courses of study ordinarily adopted by the state board of education!"

Post Prim **United States of America**

Norman Public Schools/Noble Public Schools. Something for youth and media: activity guide/languages arts - 1982-83. Norman, Oklahoma State Department of Education, 1983.

Product of inservice activities for language arts teachers and library media specialists, K-12. For each of the various grade levels a series of activities and resources are suggested which relate to the attainment of specified learning objectives. The activities are intended for independent and small group use while closely attuned to the American curriculum; the activities are useful models for adaption.

Post Prim Sec **United States of America**

Norman Public Schools/Noble Public Schools. Something for youth and media: activity guide/social studies. Norman, Oklahoma, State Department of Education, 1982.

Product of inservice activities for social studies teachers and library media specialists, K-12. The same format and style as the Activity Guide/Language Arts cited above.

Post Prim Sec **United States of America**

Northern Territory Department of Education. Information skills in the primary schools. Darwin, N.T., Department of Education, 1984.

This sequenced program of learning aims to teach primary school students to become independent and effective information users. It sets out the minimum competencies considered desirable at the end of each year of primary education in areas relating to library organisations; the book, care and parts; non-book resources; locating resources, and research and reporting skills. The format of the program is objectives based with main ideas and activities suggested under each learning objective.

Post Prim **Australia**

Oklahama Department of Education. Stacks of ideas: activities for library media centre and classroom K-12. Oklahoma City, State Department of Education, 1983.

Sets out units of study which combine library/media-use skills with regular classroom learning. The units rely on recognition of the complementary roles of the classroom teacher and teacher-librarian in the schools instructional program. Excellent models which could be adapted to suit the requirements of local curricula.

Post Prim Sec **United States of America**

Ontario Ministry of Education. Partners in action: the library resource centre in the school curriculum. Toronto,: Ministry of Education, Ontario, 1982.

In support of the implementation of resource-based learning programs, this document suggests that the effective use of learning resource centres relies on the interaction of the school principal, the subject teacher and the teacher-librarian. Complementary role models for each of the three are outlined comprehensively yet concisely.

Pre Post Prim Sec **Canada**

Peterborough County Board of Education. Library/learning skills. (Chart, n.d.)

This chart sets out sequences of library/learning skills for each year of schooling from kindergarten to year 13. Skills are grouped into five areas: locating materials, selecting and interpreting information, recording information, presenting information and appreciation and enjoyment. The skills suggested relate to print and non-print sources, and a variety of methods of information handling including computer-based systems. Layout of the chart enables the educator to gain an appreciation of the importance of a sequential development of learning skills.

Pre Post Prim Sec **Canada**

Project Loex. Integrating library instruction into the curriculum. Bibliography compiled by Michael Bell Available from Project Loex (Attention: Carolyn Kirkendall) Eastern Michigan University, Centre for Educational Resources, Ypsilanti, Michigan, 48197: April, 1984.

This annotated bibliography from the Loex clearinghouse (Library Orientation and Instruction Exchange) cites 25 items published in the U.S.A. between 1975 and 1983. Divided into two sections, the first deals with library instruction in elementary and high school. The second and larger section describes instruction activities undertaken in college and university libraries.

Post Prim Sec **United States of America**

Queensland, Department of Education Library and Resource Services Branch. Resource management for secondary schools. Prepared by Sally Fraser, Margaret Dodgson, Joan Jenkins. 5th edition. Brisbane, Queensland Department of Education, 1985.

Section I of this document outlines the concept of a whole school developed policy towards the management of learning resources. It describes how such a policy supports the curriculum through co-operation between teachers and teacher-librarians. Section II goes on to suggest organisational systems which will support this approach to learning.

Post Sec **Australia**

Saddler, Virginia B. Role of the library in education: the library image as presented in selected teacher training textbooks in use in the State of Kentucky. 1970. (ED 101722)

Although now rather dated, this was one of the first pieces of research to examine the role of the library in education. Includes a unit outline suggesting items which should be incorporated in a chapter of an education text book on the library's role in public education. Sees that role as one of transmitting organised information into every facet of the school. Rejects the notion of a library as depository only.

Pre Post Prim Sec **United States of America**

Schwartz, Barbara Teaching library skills in freshman English: an undergraduate library's experience. Austin, General Libraries Office, 1981. (Contributions to Librarianship No. 6).

Annotated in the Project Loex bibliography. "Describes program integrating library instruction with Freshman English courses at the University of Texas, Austin. Discusses the close co-operation between librarians and English faculty necessary to implement this program; means by which such contacts may be established; the impact of this program on library operations; and what materials and personnel are necessary to run it ..."

Pre Post **United States of America**

Social Education Materials Project. Finding out. Canberra, Curriculum Development Centre, 1977. (Part of Community Study unit.)

From a series of curriculum material aiming to act as a model for curriculum development in social education, this kit seeks to develop in secondary students the skills needed to survey and report on social issues within their immediate community. Various techniques are included such as interviews, questionnaires, samples and the processing, analysis and reporting of results.

Pre Post Sec **Australia**

South Australian Education Department. School Libraries Branch. Managing resources in schools. Adelaide, Government Printer, 1984. (A supplement to Review, vol.12, no.2.)

Outlines a procedure for schools wishing to develop a whole school approach to the management of learning resources. The underlying premise for such a policy is to make certain that resource based learning programs are supported by effective management of these resources. It suggests that the establishment of a School Resource Management Committee is one way of ensuring planning and continuity of the school's resources.

Post Prim Sec **Australia**

South Australian Education Department. School Libraries Branch. Using resources in schools. Adelaide, Government Printer, 1984. (A supplement to Review, vol.12, no.3.)

Highlights the role of the teacher and the student in resource-based learning programs. The student role centres on the acquisition of a range of skills to do with the location, selection, organisation and use of information. It suggests part of the teacher's role is to plan for the sequential development of these information skills in their students. Other aspects of the role include making the best use of available resources, integrating resource centre activities with classroom activities, using literature and using the teacher-librarian.

Pre Post Prim Sec **Australia**

South Pacific Region Pilot Project on School Library Development. Training programs: course proposal no.1 - course for all teachers on the use of information resources and libraries by teachers. Paris, Unesco, for the General Information Programme and Unisist, 1983. (PGI/83/WS/11)

A comprehensive training course designed for primary and secondary teachers which aims to raise awareness of and ability to utilise resources and libraries in learning. May be used either as part of a pre-service teacher education program or with trained teachers as an in-service activity to enhance their professional growth. Developed specifically for the South Pacific Region.

Pre Post Prim Sec **South Pacific**

Stringer, Roger. Education for the use of libraries. Part of the proposals from Gweru Teachers' College to the Zimbabwe Ministry of Education for the revision of "Primary Teacher Education: Syllabuses and Regulations 1978" which is to be expanded to include secondary teacher education, 1984.

A course outline for educating college students in library use. The course falls into two sections. The first section is a general orientation program to the college incorporating the mechanics of library use with basic principles of information handling. The second section builds and consolidates skills introduced in the first section and gives special emphasis to teaching prospective teachers how to teach some of these skills at the school level.

Pre Sec **Zimbabwe**

Stringer, Roger. Integrating library user education with teaching English as a second language, an experiment at Gweru Teachers College, Zimbabwe, Infuse (Loughborough), vol.8, no.5, October 1984, p.5-8.

Describes a course of study developed to address the situation where library materials in the institution are in English, a second language of its users. Instruction in library use was integrated with the trainee teachers' learning of English as a second language.

Pre Sec **Zimbabwe**

Tabberer, Ralph. Study and information skills in schools. Project sponsored by British Library and National Foundation for Educational Research (Scheduled for completion in 1985).

Describes a research project which commenced in 1979 and aimed to investigate the nature of study skills programs undertaken by 16-19 year olds in some schools and colleges. The programs investigated represented a variety of content and teaching practice, but in all cases were conducted by subject teachers. Common problems were identified and suggestions for their solution may be found in the conclusions of this investigation.

Pre Post Sec **United Kingdom**

Tasmania. Education Department. Teaching students how to learn: ideas for teaching information skills. Hobart, Education Department of Tasmania, 1984. (Curric, LB1049. T4).

A co-operative project undertaken by members of the Curriculum Centre, Library Services Branch, Division of Technical and Further Education and teachers in schools and colleges. Offers different approaches to the actual teaching of information skills rather than identifying and listing skills which should be taught. Includes useful ideas for classroom application, in particular a framework for student inquiry guides which seeks to promote independent learning in students.

Pre Post Prim Sec **Australia**

Trithart, David. Library resources in education: an introductory module for students and teachers. Potsdam, State University of New York, Potsdam College, 1976. (ED 124129).

Working on the assumption that libraries are designed for people who know how to use them, this guide seeks to provide instruction in basic library skills. As well as a walking tour of the library, instruction in the use of reference material, the card catalog, periodicals and indexes, ERIC and the curriculum materials centre is provided.

Pre Post **United States of America**

University of Nigeria, Nsukka. Outline of Course Ed. 326 - School Librarianship. (Lecturer: Virginia Dike), 1984.

The aim of this course is to introduce prospective teachers to the role of libraries in education and to teach them the basics of effective use of school libraries. It equips with the fundamental principles of library science those who may be called upon to serve as teacher-librarians.

Pre Prim Sec **Nigeria**

Vancouver School Board. Package of materials for use with faculty in curriculum areas at the University of British Columbia to encourage them to work with their student teachers to develop a knowledge of the role of the teacher-librarian as a teaching partner.
(Document not seen by Project Co-ordinator).

Canada

Wehmeyer, Lillian Biermann. The school librarian as educator. Littleton, Colorado, Libraries Unlimited, 1976. (A second edition was published in 1984.)

This work of some years standing contains a useful chapter on the teaching of search strategies as a library skill. It recognises that a commmon problem for school library users is to be able to come up with a range of alternative subject headings when they have not been successful in locating the terms used by the catalogers. Six patterns from which students may develop the skills of independent cross referencing are identified.

Post Prim Sec **United States of America**

Williams, Dorothy A. The microcomputer in the school library project (MISLIP). Infuse (Loughborough) vol.8, no.3, June 1984, p.12-13; and vol.9, no.1, February 1985, p.8-9.

This project currently in progress at Bankhead Academy, Aberdeen, Scotland, has linked a library skills program with one specific course - Man: a course of study (MACOS) - to create an integrated approach to the teaching of information skills. Part of the project has been the development of a microcomputer database for MACOS which utilizes a keyword approach for the retrieval of information. Students both contribute and access information in the database. Guidelines will be produced at the end of the project for teachers and librarians interested in developing a similar program.

Post **United Kingdom**

Wolcott, Mary Poston Curriculum activity book on agriculture. Delaware County, Agriculture Education Committee, 1985.

The purpose of this activity booklet is to integrate library skills with various aspects of the fourth grade curriculum using agricultural information. It encourages teachers to utilize parts of the guide in conjunction with visits to the school library. Produced to present agricultural statistics in an interesting manner from which specific skills may be developed.

Post Prim **United States of America**

APPENDIX B

SELECTED INFORMATION SKILLS ACROSS THE CURRICULUM PLANS

The following extracts of documentation from two schools in the United Kingdom are included to illustrate the process schools have used to develop whole school policies for learning which incorporate information skills. Full documentation and information about these schools are available from Ann Irving of Loughborough University.

I. NORTH WESTMINSTER COMMUNITY SCHOOL

1. Introductory Statement

Traditionally, education is seen as a process by which information and ideas are "fed into" the individual from different areas of knowledge. The direction is from the subject to the individual; she/he is expected to absorb, learn and remember as much as possible. Much consideration has, correctly, been given to developing a content curriculum that is appropriate to the needs of the students and has relevance for the modern world.

In recent years there has been an increasing emphasis in schools on the process of learning. This focus on "how children learn" rather than solely on what they learn has led to a growing demand for the teaching of study or learning skills and the enhancement of autonomous learning by pupils.

This has been reflected in new modes of examinations and in course work assessment, and applies also to work of all levels and types within schools. Examples of these skills are:

(a) Self organisation and planning
(b) Note taking and note making
(c) Appropriate reading strategies
(d) Library user skills
(e) Question formulating
(f) Writing for specific purpose and audience
(g) Listening skills.

These skills can be taught in schools; this teaching is most effective if it is embedded into subject teaching and learning across the curriculum (including the pastoral curriculum). Experience shows that as children develop these skills, they gain more confidence and can manage their own learning since they understand the nature of the learning process. Children can work at their own pace and extend themselves as they adopt the tools to learning independently. By focusing on the process of learning, it is easier for the teachers to identify learning problems and to plan appropriate individual strategies. Pupils then find it easier to assess their own learning and to transfer learning experiences from one subject area to another.

A school policy on study skills is an attempt to develop a skills curriculum that gives the pupils increased autonomy over their learning and aims to help children to see learning as a continuous process which goes beyond their years in school.

Mixed ability teaching, now common throughout much of the school, necessitates that a large proportion of the children's time is spent working on their own tasks, either individually or in groups. However, we cannot just leave it to pupils to acquire the requisite skills for independent learning. Instead of just teaching content, we must help them to learn how to learn, think, recall, create, solve problems and acquire the skills essential to study. They then have a direction of learning which goes out from them, the pupils, to the subject.

Research has shown that an isolated study skills programme is at best ineffective, and can be confusing, if not damaging. Isolated from the content of the curriculum, there is some danger that concentration on learning skills may be viewed as a trivial activity. Moreover, an unrelated study skills programme could define learning skills which confuse the pupils and may not answer their real learning needs. Study skills should form an integral part of the planned teaching and learning programme and should be the responsibility of all teachers.

2. The Aims and General Objectives of a Study Skills Policy

The aims of a study skills policy should be to provide pupils with a range of skills that allows them to choose the most appropriate and personally satisfying strategies for the task in hand.

A whole school policy on study skills should aim to provide a continuity of learning experiences between departments and between subjects. The development of such a policy, as an integral part of the curriculum, will provide a unifying process whereby the pupils will be encouraged to transfer and extend skills from one area of the school curriculum to another.

By emphasising the process of learning, as well as the content, the pupils should begin to participate in, and increasingly be responsibile for their own learning. A study skills policy should aim for a decreasing dependence on the teacher so that the learners' autonomy should be complete by the end of their years at school.

The general objectives of the policy are to articulate ways of helping students to:

(a) achieve a measure of self-organisation in their work
(b) approach a variety of learning tasks independently and effectively
(c) handle the resources available to them with confidence
(d) develop skills and attitudes which generate a "need to know"
(e) communicate effectively with a sense of audience and certainty.

3. A Check List of Study Skills

This is a check list of study skills contained in an integrated skills programme:

1. Self-organisation and planning
2. Finding information and collecting data
3. Using books and other resources
4. Reading skills
5. Listening and viewing skills
6. Speaking skills
7. Note-making and note-taking
8. Using information
9. Presenting information
10. Self-appraisal
11. Examination techniques.

4. The Implications of a Whole School Policy on Study Skills

A whole school approach to study skills necessitates the involvement of all staff in the awareness, identification and development of strategies to overcome learning difficulties. The study skills check list can only become a meaningful reality if analysed by departments. The result of the analysis should sensitise staff to the pupils' needs and to the contributions that staff can make to overcome pupils' learning difficulties.

A three-phase approach to the development of a study skills programme is proposed:

(a) awareness by staff of the value of introducing study skills' strategies;

(b) identifying the staff training needs to acquire an understanding of the strategies;

(c) implementing the strategies within the subject curriculum.

Implementation of a whole school policy on study skills should proceed at a rate which is neither too rapid nor too protracted. Combined efforts must be applied by all staff to monitor developments in students' learning activities which indicate incremental improvement in learning to learn skills over their school careers.

Skills

	READING							SELF ORGANISATION & PLANNING								NOTE TAKING-MAKING							WRITING							LISTENING FOR						INFORMATION					EXAMS				LIBRARY								
	SKIM	SCAN	SURVEY	INTENSIVE	EXTENSIVE	REFLECTIVE	QUESTION	TASK	ESSAY	PROJECT	REVISION	COURSE	RESOURCES	TIME	SELF	LAYOUT	PRESENTATION	LINEAR	PATTERN	REVIEWING	FLOW DIAG	KEYWORDS	LAYOUT	PRESENTATION	SENSE OF AUDIENCE	STRUCTURE	LEGIBILITY	PLANNING	INSTRUCTION	FACT	FICTION	OPINION	CAUSE/EFFECT	IMPLICATION	LOGIC	SEEKING	IDENTIFYING	RECORDING	PRESENTING	USING	REVIEWING	REVISING	PLANNING	RECALLING	RULES	CATOLOGUE	CLASSIFICATION	SUBJECT INDEX	SEARCHING	LOCATING	BIBLIOGRAPHIC	GLOSSARY	[illegible]

5. Proposals

It is proposed that:

(i) Departments are requested to consider the use of the framework on page 92 to analyse a section of the content of their teaching and learning programmes and to indicate the skills required by pupils in the areas covered.

(ii) School focused inservice workshops be arranged which are inter-departmental to discuss the nature of the skills, strategies and available resources to facilitate implementation.

(iii) Monitoring procedures be established to track each pupil's skill attainment at intervals in both departmental and pastoral programmes. A suitable developmental profile should be designed.

II. QUINTIN KYNASTON SCHOOL

1. Introduction

Quintin Kynaston School was formed by the amalgamation of two schools, on the same site, in 1969. For the first four years, the buildings were used as they had been established in the original schools. In 1974, the use of the building was rationalised to provide each department with its own departmental area. These areas gave teachers their own teaching room and a resource room as a base for course materials.

The development of departmental areas provided an organisational support to the decision to introduce mixed ability teaching into years 1-3 in all subjects. This decision was taken at a full staff conference held in February, 1974, with all staff participating fully in the decision. The introduction of mixed ability teaching was the first attempt to develop policy which gave expression to one of the central aims as a comprehensive school, namely, to demonstrate to all children that they are of equal value. All staff were now involved, for the first time, in devising courses which embraced the whole ability range. The idea of co-operative course planning grew naturally out of this commitment to mixed ability teaching.

In October, 1976, a second staff conference embraced the idea that children's learning could be strengthened if there was more emphasis on the learning process in all courses. The Curriculum Review working party presented a conference paper which analysed subject structures and drew out the common elements in the learning process. This work was complementary to the trends in course planning for mixed ability teaching which was placing increased emphasis on the preparation of work for individual students. Helping children to manage their own learning was further emphasised when heads of department devised a list of criteria which needed to be mastered if children were to proceed to any degree of real independence in their learning.

Course planning proceeds in a systematic manner, with departments following a curriculum process, which begins with the definition of course aims.

These are related, not only to the school criteria defined by heads of departments, but also to the department's subject specific criteria. The school has now been working for six years on mixed ability teaching, supported by co-operative course planning and cross curriculum support for learning through a study skills programme.

2. The Curriculum Process

Whether planning a whole three year course or planning an assignment lasting a few weeks, the same curriculum process needs to be applied. This takes the form of a series of questions:

1. What are the **aims** of the course/assignment?
2. What are the **objectives** of the course/assignment (i.e. guiding principles for planning learning)?
3. What are the **learning experiences** most appropriate to the objectives in 2?
4. What is the **content** most appropriate for the understanding of the concepts and intellectual skills (objectives) listed in 2?
5. What forms of **assessment** are to be used to determine how much pupils are learning?
6. How is **moderation** to be organised in order to determine whether or not mastery grades are being awarded for the same levels of work? (The findings here are central to the next stage on evaluation.)
7. How is the course to be **evaluated** and changes made in the course organisation?
8. Report by course co-ordinators on moderation and evaluation.

The overall school aim is to help pupils move towards becoming more independent learners. The following criteria have been defined by which judgments can be made of the degree to which a pupil has become independent in his or her learning.

STUDY SKILLS/PERSONAL

1.0 Organisation and Presentation

2.0 Information Gathering
    2.1 Use of library resource centre catalogues
    2.2 Use of book contents/index
    2.3 Use of appropriate reading strategy
    2.4 Reading for understanding
    2.5 Note taking from books, films, etc.
    2.6 Interpreting tables, diagrams, etc.

3.0 Information Using
    3.1 Understanding course concepts
    3.2 Asking analytical questions
    3.3. Formulation of hypotheses

3.4 Essay writing: Expressive
Transactional
Poetic
3.5 Project work: Expressive
Transactional
Poetic
3.6 Ability to reflect and draw conclusions
3.7 Sensitivity to audience and purpose
3.8 Oral expression.

4.0 Listening

5.0 Psychomotor Skills

6.0 Subject Specifics.

These criteria focus on the **learning process** which is the way pupils study/learn rather than the content of their learning. These school criteria are an essential reminder that much of what pupils learn about how to learn is experienced across the subject departments. Subject specific criteria should be defined for all courses and added to the school criteria. The complete list of criteria can then be used as a checklist to help in the defining of course objectives and the choosing of appropriate learning experiences.

3. Learning Across the Curriculum

The planning of any course or assignment should give emphasis to those intellectual skills which help pupils to learn how to learn. These skills collectively make up the **learning process.**

There have been several working parties meeting regularly over a number of years. Although each group has a separate and particular focus, they have in common the aim to promote effective learning across the curriculum. The working parties are as follows:

- Social Education Course Development
- Mixed Ability Teaching
- Language Across the Curriculum
- Maths Across the Curriculum
- Study Skills Development
- Sexual Differentiation in Schooling
- Curriculum Analysis and Development.

These working parties make recommendations to staff. Their work is co-ordinated and reviewed by the Support for Learning Group which is a forum comprising members of each working party. This latter group is responsible for staff conferences and inservice courses.

Study skills are built into Social Education which is the only core course common to all pupils through every year in the school. The following four dangers to be aware of when building skills teaching into courses have been identifed:

- attempting to teach too many skills simultaneously
- not allowing sufficient time to consolidate skills
- setting assignments which demand too large a repertoire of skills
- repeating the same skill too frequently in different subjects.

Induction programmes in the skills required to use the library resource centre and to plan the optimum use of private study time are considered essential components of a whole school learning across the curriculum policy. By placing emphasis in course planning on the learning process, teachers are encouraged to see themselves, not as subject specialists, but as teachers able to help pupils work with the organisation of their learning.

The use of a teacher researcher to evaluate the process by which the school promotes learning across the curriculum through the development of descriptive data is considered an integral part of the curriculum process at the school. Such a researcher can examine the extent to which the aim of the whole school policies or learning are part of the actual learning being experienced by pupils. On the basis of these findings, the school can improve the quality of the curriculum and learning processes being used by the school, thus strengthening the relationship between evaluation and the developmental process in the school. An outcome of this would be the setting of priorities for further inservice training within the school which would strengthen the whole school policy for learning.

APPENDIX C

CASE STUDIES

Introduction

1. Preservice Teacher Education

   Zimbabwe - Gweru Teachers' College

2. Inservice Teacher Education

   United Kingdom

3. Inservice Teacher Education

   United States - Norman Public Schools

4. Preservice and Inservice Teacher Education

   South Pacific Region

INTRODUCTION

The following case studies have been selected to illustrate particular approaches currently being implemented within teacher education in developed and developing countries:

> **Case Study 1** describes a user education programme for prospective teachers which was developed and implemented by English Language Lecturers, Subject Lecturers and the Librarian at Gweru Teachers' College, Zimbabwe.
>
> **Case Study 2** presents an overview of inservice activities on the school library and information skills available for teachers in the United Kingdom.
>
> **Case Study 3** describes particular inservice programmes at Norman, Oklahoma, in the United States, designed to increase the use of the school library in which teachers and librarians compiled curriculum related activities in Social Studies and Language Arts.
>
> **Case Study 4** gives details of the course for teachers designed to increase their use of information sources and resources in teaching, and their ability to teach information skills and work co-operatively with the school librarian.

1. PRESERVICE TEACHER EDUCATION

ZIMBABWE - GWERU TEACHERS' COLLEGE : USER EDUCATION FOR PROSPECTIVE TEACHERS

The user education programme offered at Gweru Teachers' College in 1983 was based on a syllabus, Library Education for Student Teachers, which was drawn up by Zimbabwe's college librarians in April 1982. The syllabus, while accepted in principle by the academic authorities, was not to become a required component of the teacher education course, but was left to individual colleges to implement as (and if) they wished.

The syllabus itself envisaged three major elements in the library education of student teachers:

(i) library orientation - aimed at "introducing the college library and its resources to new students";

(ii) information skills - aimed at "developing the skills and attitudes necessary for the student to gain the best educational value from library resources, and at preparing him to play an active role as a teacher in making effective use of school library resources in his teaching programme";

(iii) organization of the school library - aimed at "giving the student the basic skills necessary to organize a small school library, and to enable him to play an active role as a teacher in its development".

While the first and last of these elements were to be conducted by the librarian as modules and were thus relatively easy to implement, the second element was more difficult as it required the involvement of the whole college using an integrated, cross-curriculum approach. An opportunity did, however, exist through the General English course.

All students followed this course, the aims of which were to equip the students with the higher-level English language skills they would need to enable them to study effectively at college and to teach their subjects in English, which is the medium of instruction at secondary school. The course was completed during the first year the students were at college, and already covered several relevant skills - particularly note-making, reading comprehension, scanning, skimming, etc.

Furthermore, since the vast majority of the library's resources were (and would continue to be) in English, the students' second language, it was evident that the students' ability to use those resources effectively would be determined largely by their facility in the English language. The expertise of the lecturers in the English Department would assist in the achievement of the aims of the library education syllabus.

The General English course was in the process of being restructured, and in consultation with the British Council's English Language Officer, a new programme was devised. It was agreed that the course be designed around an integrated series of authentic study activities involving the use of English language, communication and information skills.

It was planned, therefore, that students would undertake a project during the first term, and weaknesses in specific skills might then be identified and could be remediated during the second and third terms. The project would be based upon library resources and would involve the participation of subject lecturers, ELT lecturers and librarian.

Following library orientation sessions, each subject department would give a 'lead' lecture on a broad topic to students majoring in that subject. Each student would then select a sub-topic from that lecture on which to do library research. The librarian then had a session with each subject group to consider how to analyse their chosen topic in relation to search terms, subject headings, etc.; also covered were the use of basic reference works, and referencing techniques.

Students then spent several weeks in the library (both timetabled and in their free time) gathering information on their topic. They were to produce a written piece of work between 10 and 15 pages in length, using at least ten different sources, and with some attempt at a personal viewpoint incorporated. Subject lecturers, ELT staff and librarian were all available during the timetabled periods in order to provide individual guidance and monitor progress.

Evaluation of the written assignment was done by ELT staff for language ability, by subject lecturers for content, and by the librarian for suitable selection of available resources, and correct acknowledgement of sources.

The library evaluation showed up many weaknesses in the students' ability to make effective use of library resources. In particular it was evident that most of them were doing this kind of research for the first time. The absence of libraries in most secondary schools meant that this was the first time that many students had been confronted with a large collection of information sources.

A survey conducted by the English Department did, however, indicate that the students did find the project a worthwhile exercise. The ELT staff were the only ones who had the opportunity to remediate students' weaknesses; particularly weak students followed modules in note-making, reading comprehension, etc. during the rest of the first year.

From the library point of view, it was disappointing that there could be little follow-up work. Many subject lecturers were not convinced of the value of these skills and resented the time spent on the exercise. By the following year (1984) they insisted that more time was necessary on the examinable courses, and the General English project was dropped.

Convincing lecturing staff that knowledge of information skills will help develop a better teacher remains a difficult task. Courses and teaching methods tend to be syllabus-bound and passing the examination or obtaining the qualification continues to be paramount. It is hoped that the students who followed the General English project will have benefited from it in some way. The recognition that such a course is of vital importance to prospective teachers does, however, seem to be some way away.

ROGER STRINGER
Librarian: Gweru Teachers College July 1985

2. INSERVICE TEACHER EDUCATION

UNITED KINGDOM: OVERVIEW OF INSERVICE ACTIVITIES

Introduction

Little attention is paid to library and information skills or to the potential use of the library and learning resources in learning during initial teacher training. Indeed, sad to say, few teacher training institutions in the United Kingdom even direct student teachers towards the resources of the widely provided School Library Services as a source of materials for their teaching practice, preferring to rely on the college's own 'Teaching Practice' library which usually consists of a comparatively small collection of textbooks and library books. It is rare to find multi-media materials included in such a collection. Most student teachers receive some guidance in the use of the institution's own library, and may also participate in a short course of study skills, but it is rare for emphasis on such courses to be extended from the students' own needs to the wider relevance of such skills to learning in general and pupil learning in particular.

Current In-Service Activities and Opportunities

Once teachers are appointed to a teaching position, there are a number of methods through which they might develop their skills through inservice training. The major system is through the inservice training programme for teachers mounted by the Local Education Authority (LEA). This is usually devised by the members of the advisory and inspectorate team within the authority and financed by the Local Authority's Education Department. Courses, which may be residential, one day, or evening, are usually devised and directed by the Local Authority Advisers and may reflect their current concerns or be a response to national initiatives such as curriculum initiatives from the government or Her Majesty's Inspectors. It is not as yet common to find study skills, resource-based learning or library aspects of the curriculum covered in such courses.

Many School Library Services in the United Kingdom provide inservice training to teachers, much of it aimed at those responsible for the running of the school library, but with a developing trend towards courses aimed at Heads, heads of departments and classroom teachers on the management and curriculum implications of effective library use. The following list of courses run by School Library Services in the United Kingdom was compiled in 1985:

- The Library and the Curriculum
- Assignments and your local Library
- Information/Study Skills Workshops
- Learning theory, effective teaching and resources
- Centrality of Library in all subject courses
- Micros and the School Library
- Implications of Government or DES curriculum reports
- Initiatives for School Library development
- Organisation and use of Library
- Setting up a Primary School Library
- Stock Selection and Management

- Exploitation of School Library
- Topic work and Resource needs
- Information and Library Skills
- Resources for Children with special needs

- Religious Education through Fiction
- Science Fiction 5-9's
- Issues: Should fiction tell the truth
- Criteria for selecting information books
- Planning a book week
- Poetry in the classroom
- Standards of Library provision
- Reading Development and Children's Literature

- The Secondary School Library in the 80's
- Resource-based learning and the Library
- Stock implications of the changing curriculum
- Reviewing books workshop
- Educational trends and developments
- Examinations and their alternatives

- Use of picture books in Secondary School
- Getting more out of your School Library
- Policy for School Library
- Teenage fiction/promotion
- Information/Study Skills Workshops
- School Library and the Home Economics Teacher

Any further training in these topics will require teachers to travel further to regional or national courses. There are courses run at the Regional Microelectronics Education Programme (MEP) Centres which focus on information handling and retrieval through the use of microcomputers; the Department of Education and Science (DES) run some courses (usually a week long) on library organisation and information skills; and a few teacher training institutions and Polytechnics who mounted courses for the Certificate in School Library Studies (now discontinued) continue to run longer courses on the organisation and use of school libraries.

Strategies adopted and associated problems

The difficulties of teachers attending lengthy courses are well known. The trend in the United Kingdom is for teachers to go to meetings and courses in what is termed the 'happy hour' or 'twilight courses', i.e. around 4 to 6 p.m.

The basic characteristic of such training can be categorised as part-time and voluntary and this model certainly does not answer the present needs of teachers. The crucial weakness of this model is that only 3 c's will attend: the committed, the conscientious, or the converted. Those who might benefit from innovation or update are rarely present. Other problems with this approach are that it assumes that teachers or librarians will perceive the need to attend - it relies too heavily on the talents of School Library Services staff, advisers or head teachers, to persuade staff to attend, or on participants' own commitment.

The time allocated is too short for real learning. Inservice teacher education (INSET) rarely provides certificates or automatic promotion and often the ideas picked up cannot be put into practice because of the cutbacks and other constraints. There are, of course, other patterns of training:

- the sandwich pattern - e.g. one full day plus some school-based work monitored at evening sessions,
- the concentrated weekend or 1 - 5 days pattern - free from school pressures.

Both of these are more effective than the twilight pattern, but the choice of pattern is rarely in the hands of course provider who, in theory, should plan on what is most suited to achieving course objectives, but in reality has to settle for what is possible and practicable.

It is now recognised that courses outside the school can have a positive value in that course members represent varied backgrounds and opinions, that meeting away from schools (or library) can give a more detached view of current practice but that ideally it is reinforced if combined with school-based INSET.

The current upsurge of school-based INSET has provided an invaluable opportunity to discuss library organisations and library use within the school context, involving all teachers in consideration of their role in use of the library in their teaching and their responsibilities in teaching study skills. It is a strategy which helps more effective implementation of training by reducing the gap between theory and practice.

The Cascade strategy of training is an increasingly popular form of inservice training and, when properly supported, is proving effective. It allows the committed, competent enthusiasts to be trained and then to be involved in training others. Such a strategy is particularly effective in encouraging and developing the skills of teachers prepared to adopt resources using strategies in their classroom teaching. Having helped them to develop the skills of finding and using information, identifying relevant information, framing an enquiry, locating and selecting from a wide range of resources and applying that information, it is then possible for them to pass these skills on to both pupils and colleagues.

Whilst most inservice courses are initiated by Advisers in LEA's, they are urged to work more co-operatively with the School Library Service and to include other relevant local institutions. There are an increasing number of good examples of such co-operative efforts, librarians speaking on courses for Heads on the management implication of school library development, or on curriculum courses on study skills or resource-based implications for teachers in specific subject areas. There have also been a few examples of close co-operation on courses between librarians and other organisations, notably the MEP.

Conclusion

Inservice training for teachers focusing on the effective use of library resources and the development of information skills are still in their infancy in the United Kingdom. Virtually nothing is done in this area in initial training, and most of the work in this area for practising teachers is currently carried out by librarians from the School Library Services.

Recent curriculum initiatives and national reports have focused attention on this area, and there is an increase in relevant courses in local authorities. Increasingly, librarians are pressing local authorities not only to support more library related courses in schools and teachers' centres, but to include discussion of library use issues in the regular courses run for Heads, Deputy Heads and classroom teachers, achieving a co-operative approach to INSET through a closer partnership between librarians and advisers.

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3. INSERVICE TEACHER EDUCATION

UNITED STATES: NORMAN PUBLIC SCHOOLS

The Something for YOUth and MEdia project was an inservice programme designed to increase utilization of the library media centre and its resources. It was based upon the belief that teacher influence is the most important motivator for student use of the library media centre. The project was funded by Title IVC, the innovative programme portion of the Federal Elementary and Secondary Education Act. Something for YOUth and MEdia was conducted in the Norman Public Schools, Norman, Oklahoma, during the 1980-81 and 1981-82 school years. The first year of the project the focus was upon social studies teachers. The second year focused upon language arts teachers.

The first semester of the project during each year was used to plan and produce inservice activities which would help teachers better utilize the library media centre. A planning committee of teachers and library media specialists met throughout the first semester to develop the inservice plan and to prepare sample learning activities. During the second semester of each year a six week inservice programme was held. Participants during the first year were social studies teachers and library media specialists. During the second year participants were language arts teachers and library media specialists. Inservice participants were paid stipends for attending the weekly meetings held after school hours. Planning committee members, who also were the inservice instructors, received pay for their inservice duties. Their planning committee meetings were held during school hours and substitutes were provided.

Most of the district's 18 library media specialists as well as approximately 40 teachers participated in the programme each year. Participants from a smaller nearby district were also invited to attend. Separate inservice "classes" were held for elementary, middle school and high school participants. The meetings were held in library media centres throughout the district.

Products of the programme, in addition to better informed teachers and library media specialists, were booklets of social studies and language arts learning activities, K-12, which require student use of the library media centre. Objectives for the activities were taken from the district's curriculum guides in the two subject areas and therefore were correlated with the district's ongoing instructional programme.

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September 1985

4. PRESERVICE AND INSERVICE TEACHER EDUCATION

SOUTH PACIFIC REGION: PILOT PROGRAM ON SCHOOL LIBRARY DEVELOPMENT - TRAINING PROGRAMMES FOR TEACHERS

The 20th General Conference of Unesco held in November 1978 approved a project which would promote the development of school libraries in Asia and Oceania. The inclusion of this project in the programme was proposed by the Government of Australia which wished Unesco to follow up on the recommendations of the Unesco Regional Seminar on School Libraries held in Perth from 12-17 August, 1976. The subject of that Seminar, which was organized by the Australian National Commission for Unesco, was the planning of school library services, where the problems were looked at for the Asian Region as a whole.

In 1981, with the collaboration of the University of the South Pacific, a meeting was held in Suva for the purpose of:

(1) assisting USP in the planning of the Certificate Course in Librarianship;

(2) planning such other courses as were necessary for school librarians, teachers and teacher librarians on the design, production, use and organization of learning materials.

The workshop was held from 5-16 October, 1981, and was financed by Unesco under the Regular Programme. Thirteen experts participated in the workshop representing such areas as school libraries, public libraries, university libraries, education, teacher training, and distance teaching (extension studies). Several countries in the South Pacific were represented in this group (Fiji, Amoa, Cook Islands), as well as the University of the South Pacific and South Pacific Commission.

This workshop stated that as first priority it recommended that assistance be provided through the Unesco School Library Development Project in the South Pacific for the further development of Short Courses for all teachers and that this assistance include expertise in writing detailed course material and assignments for distance teaching. The workshop participants also developed the aims and objectives of the proposed course and an outline of the topics to be included.

In 1982 Unesco provided funds to write the course for teachers on the use of information resources and libraries. A team of Australian educators was commissioned to write the course, sample assignments and lessons. This team followed the aims and objectives and content outline developed by the Pacific librarians at the 1981 Suva Conference. It is extremely important that when a course is being developed for a region, that educators from the region have the input about what is to be taught and why it is to be taught; the role of the course writers is to translate their ideas into a suitable format.

A regional meeting of librarians and educators from the Pacific Region was held in Suva, Fiji, from November 7-11, 1983. The purpose of this Unesco funded meeting was to examine the course material to see if it actually met the needs of the region. The aims and objectives of the course were:

1. Aims

(i) This short course aims to increase student teachers' and teachers' awareness of an ability to use information, sources and resources - including libraries themselves, for their teaching and with their students.

(ii) A second goal is to train teachers to assist children develop information-seeking and library-use skills, in co-operation with the teacher-in-charge of the library.

2. Objectives

On completion of this course, the student will be able to:

2.1 Show an increased awareness of "information", "resource materials" and "libraries".

2.2 Describe the functions of these elements in teaching and in learning and include resources in teaching programmes and lesson plans.

2.3 Locate the sources, find the resource materials and secure the information required for personal needs, professional development and class-work.

2.4 Evaluate and select and use appropriate resource materials (and equipment where needed) for class teaching and the needs of individual students.

2.5 Assist students to use resources and libraries - including community information sources - efficiently.

2.6 Assist students to read for pleasure and develop the habit of reading as a continuing activity.

2.7 Design and then make his/her own materials when what is wanted is not available.

2.8 Organise and promote the use of reading resources and information materials in the classroom, for example, in a "classroom resource corner".

2.9 Support the teacher-in-charge of the school library in the development of the library collection and in providing resources for classes taught and for individual students.

A note on the Objectives

Where a teacher is asked by the Headmaster to organise and operate a school resource store or a school library, the teacher should consider the need to undertake a course for teacher-librarians available locally or in the region.

The course content is outlined below:

Section 1: The Teacher Needs Information and Resources

1.1 Information, sources and resources

1.2 Types of information resources

1.3 Systematic information-seeking

Section 2: The Teacher Uses Resources in Teaching and Learning

2.1 Function and utilisation of resources in teaching and student learning

2.2 Evaluation and selection of specific information resources

2.3 Integration of resources in curriculum planning

2.4 Evaluating the effectiveness of information resources used in the classroom

Section 3: The Teacher Uses Librarians Effectively

3.1 Libraries and other information agencies

3.2 Using library resources

3.3 School library services for teachers

(In the treatment of this section, attention should be directed to what is actually available as well as what might be desirably provided.)

Section 4: The Teacher Locates Information

4.1 Locating information about information sources, required information in print materials

4.2 Locating information in print resources

4.3 Locating information in non-print (including audiovisual) resources
(It is suggested that attention be given to readily available materials from: radio, cassette recorder, camera, as this equipment may be more frequently owned by teachers or some students.)

4.4 Using audiovisual equipment

Section 5: The Teacher Produces Information Resources

5.1 Design, development and evaluation of resources

5.2 Preparation of audiovisual resources

(A note on Section 5: The content and depth of treatment of the section depends on whether the pre-service teacher education course, and/or the in-service programmes for teachers, contain a required core component on educational media or educational technology or resource development. If there are such courses, consideration should be given to the relation between that course and this proposed course so that the courses may be planned to complement each other. In that way, unknowing and unnecessary duplication may be avoided. Sufficient time for completion of **both** components is needed.)

Section 6: The Teacher Assists Students to Use Information Resources

6.1 Introduction

6.2 Developing information location and usage skills

6.3 Promoting student resource awareness and usage

6.4 Supporting the library

Section 7: The Teacher Encourages Reading for Pleasure

7.1 Teacher and student attitudes towards reading for pleasure

7.2 Stimulation of interest in reading activities

> The entire course document South Pacific Region Pilot Programme on School Library Development: Training Programmes for Teachers PG1-84/WS/13 is available from Unesco in Paris.

The Unesco course was first trialled in 1984 at the Lautoka Teachers College in Fiji. In that year 58 students completed the course which is now a required course which teachers must complete before graduation. Other teachers' colleges in the region are introducing the course in 1986 and it has also been used in Africa and in other areas outside the region.

In order to ensure that each country in the region has qualified individuals to teach the course, Unesco sponsored a workshop in Sydney, Australia, in July-August, 1985. The course for National Trainees had 16 participants, both librarians and teacher educators from 10 Pacific nations. The participants were given detailed notes on teaching specific parts of the course, they experimented with a variety of teaching techniques and developed educational resources that could be used in teaching the course.

If a regional course for teachers in utilizing educational resources is to be successful then it is important that the sequential steps of identifying the needs, the costing, the aims and objectives and content, followed by the actual writing of the course by individuals experienced in writing course materials. Potential course users should then correct and modify the course and, finally, individuals need to be trained to implement the course for teachers. This all requires considerable financial backing so that individuals can be brought together from the various countries in the region to discuss the course and also to be trained in teaching the course.

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September 1985